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User Manual
Broadxent BritePort DSL Gateway 8120

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June 2003

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CAUTION: This device is intended to be connected by the user to a CSA/TUV/UL certified/listed IBM AT or compatible personal computers in the manufacturer's defined operator access area. Check the equipment operating/installation manual and/or with the equipment manufacturer to verify/confirm if your equipment is suitable for devices to be connected to it.

ATTENTION: Ce périphérique est destiné à être connecté par l'utilisateur à un ordinateur IBM AT certifié ou listé CSA/TUV/UL ou compatible, à l'intérieur de la zone d'accès définie par le fabricant. Consulter le mode d'emploi/guide d'installation et/ou le fabricant de l'appareil pour vérifier ou confirmer qu'il est possible de connecter d'autres périphériques à votre sytème.

Notice for the USA

FCC Part 15: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, this notice is not a guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician.

Caution

To comply with the limits for the Class B digital device, pursuant to Part 15 of the FCC Rules, this device must be installed in computer equipment certified to comply with the Class B limits.

All cables used to connect the computer and peripherals must be shielded and grounded. Operation with non-certified computers or non-shielded cables may result in interference to radio or television reception.

Modifications

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the device.

Notice for Canada

This apparatus complies with the Class "B" limits for radio interference as specified in the Canadian Department of Communications Radio Interference Regulations.

Cet appareil est conforme aux normes de CLASSE "B" d'interférence radio tel que spécifié par le Ministère Canadien des Communications dans les règlements d'interférence radio.

1. INTRODUCTION

Welcome to Broadxent BritePort World! Your new Broadxent BritePort DSL Gateway 8120 brings a secure high-speed data access to your home office or small office. The ease of installation and configuration of BritePort 8120 allows you to get connected quickly without a long setup process.

Broadxent BritePort DSL Gateway 8120 uses the most advanced Asymmetric Digital Subscriber Line (ADSL) technology that transforms an ordinary telephone line into a broadband high-speed digital line for fast Internet access. BritePort 8120 complies with both ITU G.Lite and G.DMT standards and supports data transmission up to 8 Mbps downstream and up to 1 Mbps upstream, depending upon your subscription with your DSL service provider.

BritePort 8120 is equipped with four 10/100Mbps Ethernet ports that allows you to directly connect up to four PCs without needing to install additional hubs or switches. The built-in switch router features also provide a NAT firewall function protecting your LAN environment from any unauthorized access. With the easy to navigate web-based configuration tool, you can manage your DSL network efficiently both onsite and remote. Designed with qualities to provide rich features and reliable operation, Broadxent BritePort 8120 is your total network solution for a high-speed Internet access.

This user manual will help you during hardware installation, as well as setting up your computer's network configurations. Before you begin, it is very important that you carefully go through this chapter, which provides you with important safety instructions and information you should know before using your BritePort 8120. This chapter is divided into the following sections:

- Important Safety Instructions
- Getting Started
  - Important Notes
  - Model and Serial Numbers
  - Minimum System Requirements
  - Package Contents
- Customer Information Record

Important Safety Instructions

This section provides basic safety information for your Broadxent BritePort DSL Gateway 8120.

Prior to using BritePort 8120, carefully read and understand the safety instructions. These instructions must be followed to reduce the risk of fire, electric shock, or personal injury.

- Make sure that the product, BritePort 8120, is not exposed to direct sunlight or excessive heat radiation.
- Keep the product at a place where there is minimum risk of spilling any liquid.
- The surrounding ambient temperature must not exceed 40^0C (104^0F).
- Avoid humid conditions. Do not place the product near a water source or outlet such as a bath tub, sink, wash bowl, laundry tub, swimming pool, rain, wet or humid wall, and so on.
- Never clean the product with a damp cloth or use any liquid cleaner.
- Do not press, put any weight, or bend the power cord connected to a telephone equipment.
- To avoid risk of an electric shock during lightning, do not use any telephone equipment that is connected to an electric socket.
- In case of a gas leak, do not use any electric switch that is located in the vicinity of the leak.
- To report a gas leak, do not use any telephone equipment that is connected to an electric power outlet in the vicinity of the leak.
- Do not use any electric product, electric cord, or power socket that is even partially damaged.
- Do not expose yourself to dangerous voltages by opening the cover of the product or dismantling it.
- You must not access the internal assembly or circuit board of the product — none of its parts are user replaceable.
- Do not dispose of the batteries in fire — they may explode and cause injury. Besides, you must follow the local codes for special disposal instructions.
- If your modem needs any service or repairs, only qualified service personnel must handle it.

Getting Started

This section provides you important information on what to prepare prior to configuring your DSL connection, where to locate important product registration information, the minimum system requirements, and package contents.

Important Notes

- You must sign up with a DSL service provider.
- Make sure that your telephone line has been enabled for the DSL service.
- You must know if your service provider uses Dynamic Host Configuration Protocol (DHCP) or Static IP address. If your service provider uses Static IP address, then you should be provided with IP address, Subnet mask, Gateway address, and DNS address.
- For your computer connected to the Ethernet port of 8120, to set up properly for DSL connection, the following steps are required:

  (a) Install the hardware as explained in Chapter 2: Hardware Installation.

  (b) Configure the computer's Networking Properties as explained in the beginning of ***Chapter 3: BritePort Setup Wizard***.

  (c) Configure your BritePort as explained in the ***Chapter 3: BritePort Setup Wizard***.

  (d) Start using your DSL line.

- If you face any problem or for any clarification, you should go through Appendixes on Troubleshooting and Frequently Asked Questions.

Model and Serial Numbers

Your BritePort 8120 has model and serial numbers. You may locate them on the bottom of the unit. Note down the model and serial numbers for future reference.

Minimum System Requirements

For a proper operation of your Broadxent BritePort 8120, refer to the minimum system requirements listed below:

- Intel® Pentium®II 233 MHz or equivalent processor
- Microsoft Windows® 95, 98, Me, 2000, and XP
- 20 MB of free hard disk space
- 32 MB of RAM
- Installed Network Interface Card with an RJ-45 port
- a DSL ready line
- CD-ROM drive

Package Contents

Before you begin hardware installation, check your BritePort 8120 package to ensure at least all the following items are available:

- Broadxent BritePort Gateway 8120 unit
- One DC power adapter
- One Power cord
- One RJ-11 Phone cable
- One RJ-45 Ethernet cable (CAT5)
- One User Manual CD-ROM

Customer Information Record

Use the following table to record the network configurations for your DSL service and BritePort 8120. Keep this form in a safe place for your future references, in case if re-configuration of PCs and/or networks are needed.

Table 1: Important Information of your BritePort 8120 & DSL Connections

User ID and Password	
E-mail Address	
Outgoing Mail Server (SMTP)	
Incoming Mail Server (POP3)	
IP Address*	
Subnet Mask*	
Default Gateway*	
Primary DNS Address*	
Secondary DNS Address*	
Virtual Path Identifier (VPI)**	
Virtual Channel Identifier (VCI)**	
BritePort's IP Address	192.168.1.1
BritePort's Subnet mask	255.255.255.0
Your IP Address during System Configuration only	192.168.1.x (x can have any value from 2 to 254)
DSL Service Provider's Tech Support phone number	

* If your DSL service provider uses Dynamic Host Configuration Protocol (DHCP), then you will not be provided with this information.

** This information is to be entered only when you are requested to check your VCI/VPI settings by your DSL service provider. You must not change these values, unless specifically instructed by your DSL service provider.

2. HARDWARE INSTALLATION

Broadxent BritePort DSL Gateway 8120 is developed to bring you a three-in-one solution -- DSL modem, gateway router, and/or Ethernet hub -- for your small office or home office. The build-in 10/100Mbps Ethernet ports allow you to directly connect up to four PCs without needing to install additional hubs or switches. With the carefully designed form factor, you can place your BritePort 8120 either vertically or horizontally. Your BritePort 8120 is user-friendly and brings you an effortless experience to setup your network for a high-speed Internet connection.

This chapter provides information about your BritePort 8120, as well as the installation. Before you begin connecting the cables and devices to the BritePort 8120, carefully go through the following sections to ensure proper setup and performance:

- Backside View of BritePort 8120
- Connecting Microfilters
- Hardware Installation
- Connecting Your LAN
- Indicator LEDs on BritePort 8120

Backside view of Broadxent BritePort 8120

Located at the rear panel of your Broadxent BritePort 8120 are several connectors (see *Figure 2-1*) that allow you to connect DSL line, PCs, and/or a hub to your BritePort 8120. For details on connecting devices to BritePort 8120, refer to Figure 2-4 and Figure 2-5.

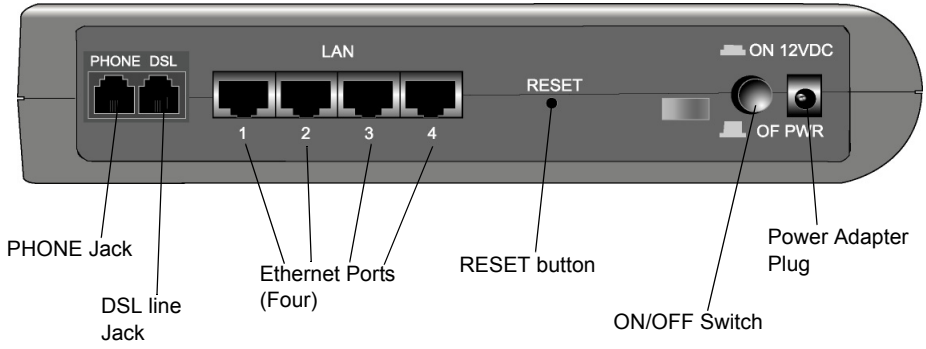


Figure 2-1: Backside view of BritePort 8120

PHONE jack
Optional: Connect a telephone equipment to the PHONE jack on BritePort 8120. Be sure to connect a microfilter in series as shown in the *Figure 2-2* and *Figure 2-3*.

Note: This PHONE jack will work only for "splitterless" DSL line. If your service provider has installed a splitter, do not use the microfilters.

DSL line jack
Using the RJ-11 phone cable, connect your DSL-enabled telephone line (the wall phone outlet) to the DSL LINE jack located on the back of you BritePort 8120.

10/100BASE-T port
Using the RJ-45 Ethernet cable, the 10/100BASE-T port connects your BritePort 8120 to the Ethernet port on a PC. You can also use the Ethernet port on BritePort 8120 to connect multiple computers through a hub. (**Note**: Using a proper Ethernet cable, crossed or straight, is required depending upon the type of port on the hub.) To support the configuration with a hub, it is recommended that you first consult your DSL service provider.

RESET button
Allow you to restore your BritePort 8120 to the default password. If you forgot your login information, this **RESET** feature will allow you to access the Web-based configuration tool of BritePort 8120 using the manufacturer default username and password. It will not reset your configuration.

ON/OFF switch
Use this switch to turn BritePort's power supply ON or OFF. When you turn off the power supply, wait for at least 10 seconds before turning it on.

12V DC In socket
Use only the supplied DC power adapter to power your BritePort 8120.

Connecting Microfilters

Each analog device, such as a telephone set, fax machine, answering machine, and analog modem, linked to the phone line that shares with your DSL service requires installing to a microfilter (or a “blocker”). It prevents the analog devices from being interfered by DSL signal.

To ensure the quality of connection of your BritePort 8120 as well as the other analog devices that share the same line, There are two ways to connect microfilters:

1. Plug one end of the microfilter, the end that has a RJ-11 connector, into a telephone wall outlet. Link the other end to a RJ-11 cable and then connect it to a analog device, such as your home phone. (Refer to *Figure 2-2* below for a sample connection.)

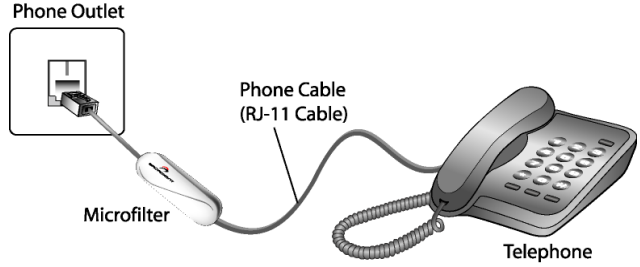


Figure 2-2

2. Plug one end of the microfilter, the end that has a RJ-11 connector, into your BritePort 8120 **PHONE** jack. Link the other end to a RJ-11 cable and then connect it to an analog device, such as your home phone. (Refer to *Figure 2-3* for a sample connection.)

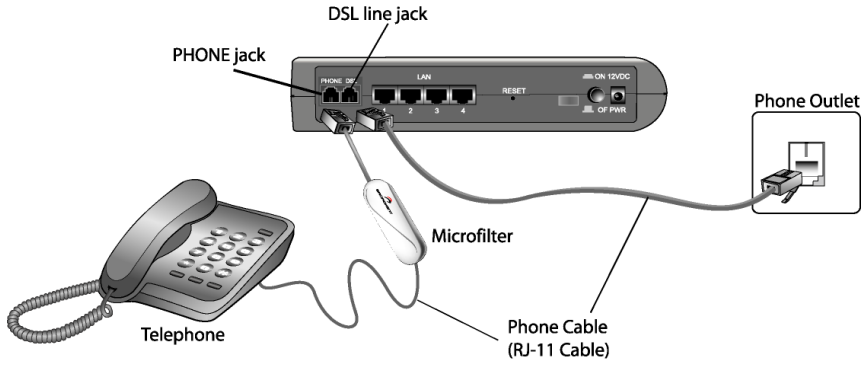


Figure 2-3

Note: If your service provider has installed a splitter, do not use the microfilters.

Important Notes:

- If you have an outlet shared by two or more devices (such as a phone and Caller ID box), you only need to install one microfilter on this outlet.
- If you have a second phone line that is separate from the DSL line, generally, you do not need to install microfilter on those outlets. However, if you experience noise on the second line, you may wish to install microfilters on those outlets as well.
- For a two-line phone where one of them shares a DSL line, if you experience static or disruption of service after installing a microfilter, you will need to purchase a line swapper. You need to first install the swapper on the outlet, and then connect the microfilter to the swapper.
- If you currently subscribe to an Intercom or Monitoring service through a phone outlet, please contact your Intercom/Monitoring service provider before installing a microfilter to the outlet. Once installation is complete, you should contact the Intercom/Monitoring service provider again to test the line.

Figure 2-4 illustrates the basic hardware connections of your BritePort 8120. Refer to Figure 2-5 for a more in depth LAN connection.

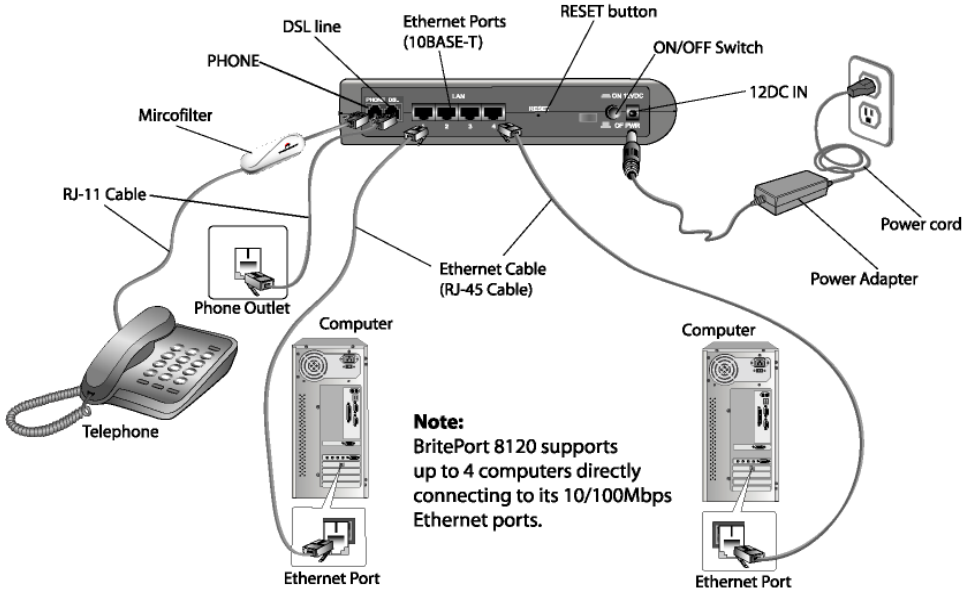


Figure 2-4: Connecting devices to BritePort 8120

Note:

- Make sure your BritePort 8120 is powered on when you configure computers on your network for DSL connection.
- You should always power on your BritePort 8120 first before you turn on your computers; otherwise, for Windows 95/98/Me systems, you would need to reboot the computers in order to detect the dynamic IP address for Internet connection.

Connecting Your LAN

Figure 2-5 illustrates a more complex DSL network conntection. You may connect your LAN to BritePort 8120 as shown. It is recommended that you consult your DSL service provider prior to setting up your DSL network for a more complex LAN configuration.

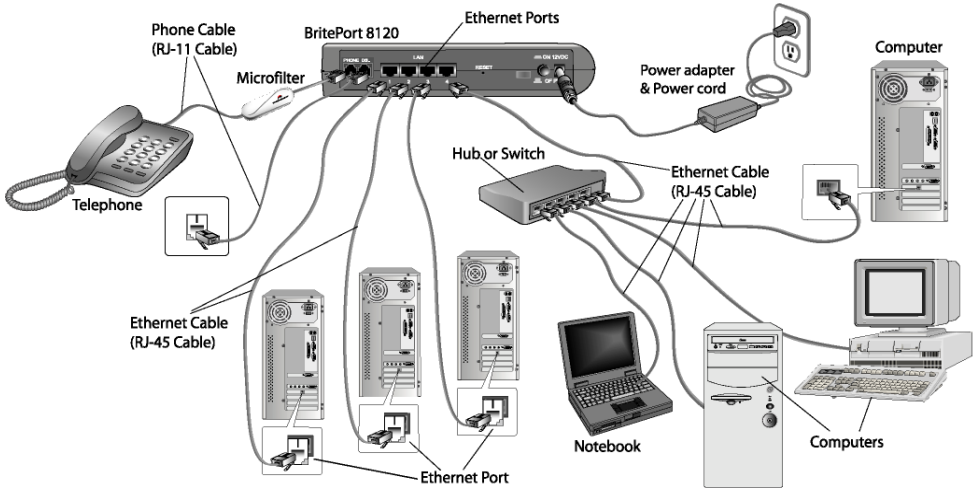


Figure 2-5: Connecting your LAN to BritePort 8120

Note:

- You should always power on your BritePort 8120 first before you turn on your computers; otherwise, for Windows 95/98/Me systems, you would need to reboot the computers in order to detect the dynamic IP address for Internet connection.
- Your BritePort 8120 can also be connected to another router to create a subnetwork. To set up your subnetwork for DSL connection, you are required to configure the **Advanced Setup**. For details, please contact your DSL service provider or refer to ***Chapter 4: BritePort Configuration Tool***.

Indicator LEDs on Broadxent BritePort 8120

Your BritePort 8120 features indicator LEDs which provides you with your DSL connection status. Refer to the *Figure 2-6* and *Table 2-1* for the function of each LED.

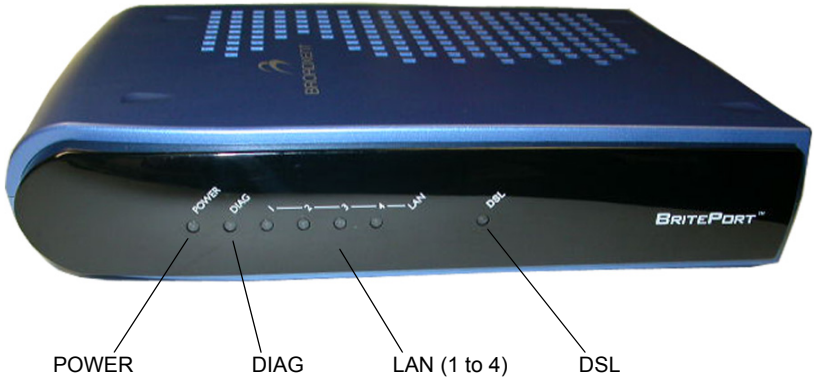


Figure 2-6: LEDs on BritePort 8120

Table 2-1: Description of LEDs

LED	Description
POWER	On when BritePort 8120 is properly connected to a power source.
DIAG	On when BritePort 8120 performs self-test at the initial power up. Once the normal operation is detected, the LED will remain off.
LAN (1 to 4)	Flashes for a few seconds and stays on when an Ethernet connection is detected. There are total four LAN LEDs.
DSL	Flashes for a few seconds and stays on when a DSL connection is established.

3. BRITEPORT SETUP WIZARD

Your BritePort 8120 provides a web-based configuration tool that allows you to configure your network with BritePort 8120 for a high-speed Internet access. The setup wizard in the web tool is designed to take you through the initial configuration process with no confusion details. It is quick and simple.

Prior to configuring your BritePort 8120, we recommend you to preview this chapter and the next chapter, ***Chapter 4: BritePort Configuration Tool***, for a general understanding of the functions available in the BritePort web tool. If you need to work with a more complex network environment, Chapter 4 would provide a good introduction for you to get through the configuration process. Always refer to ***Appendix B: Troubleshooting*** and ***Appendix C: Frequently Asked Questions,*** or contact your DSL service provider if you run into any difficulties or are not sure what to do.

This chapter brings you information about the setup wizard and also provides you instructions to configure the BritePort 8120 as well as your network computers for DSL connections . It is organized as follows:

- Before You Begin
- Configuring Your Computer
- Configuring Your BritePort for PPPoE or PPPoA
- Configuring Your BritePort for Static IP
- Configuring Your BritePort for DHCP

Before You Begin

The web-based configuration tool of BritePort 8120 can be accessed through any web browser. Prior to accessing the web tool, please check to ensure the following is ready:

- Make sure you have all the setup information ready. The setup information, including IP address, Subnet Mask, and Gateway address, should be provided by your DSL service provider at the time that your DSL line connection is established.
- If your DSL connection is via DHCP or PPPoE, your service provider will not provide you with specific IP address & Subnet Mask information.
- Make sure your BritePort 8120 is properly connected to a computer through a 10/100Mbps Ethernet port and is powered on.
- Make sure your DSL service is established and the line is connected, using a RJ-11 phone cable, to the BritePort 8120 DSL port located at the back of the unit.
- Before starting the web tool, make sure the computer that connected to your BritePort 8120 has Network Properties configured to obtain an IP address automatically. Refer to the following section, ***Configuring Your Computer***, for a step by step instructions to set up your computer for DHCP, or obtain an IP address automatically.

This section shows you how to setup your computer Network Properties to obtain an IP address automatically. This is a very important step for you to access the BirtePort 8120 web-based configuration tool; it is also a crucial step to get your network computers configured to obtain DSL connection for a high-speed Internet access.

Configuring Windows 95/98/Me for Dynamic IP Address

1. From the desktop, click **Start** -> **Settings** -> **Control Panel** (*Figure 3-1*) to open the "Control Panel" window.

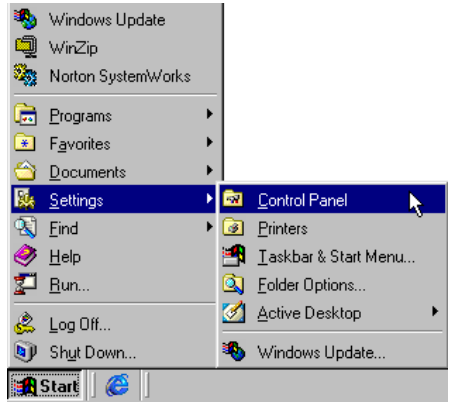


Figure 3-1

2. In the "Control Panel" window (*Figure 3-2*), double-click the **Network** icon.

Figure 3-2

3. When the "Network" dialog box similar to *Figure 3-3* appears, click the **Configuration** tab. Under the list box of "The following network components are installed", highlight the **TCP/IP->**[your Ethernet card], for example, **TCP/IP->Realtek RTL8139(A) PCI Fast Ethernet Adapter**, as shown in *Figure 3-3*. Then click the **Properties** button to bring out the "TCP/IP Properties" dialog box.

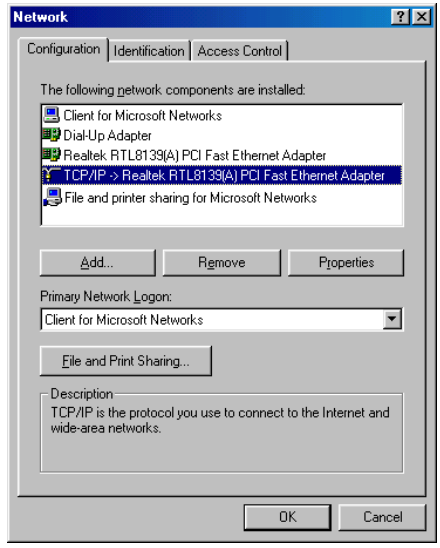


Figure 3-3

4. As the "TCP/IP Properties" dialog box ,similar to *Figure 3-4*, appears, click the **IP Address** tab to open the "IP Address" dialog box.

   Select the option, **Obtain an IP address automatically**, and click **OK** to confirm the change. The "Network" dialog box appears active again.

5. Click **OK** to close the "Network" dialog box.

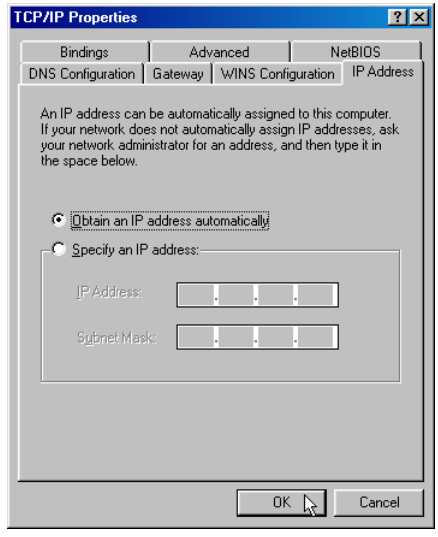

TCP/IP Properties
Bindings
Advanced
NetBIOS
DNS Configuration
Gateway
WINS Configuration
IP Address
An IP address can be automatically assigned to this computer. If your network does not automatically assign IP addresses, ask your network administrator for an address, and then type it in the space below.
Obtain an IP address automatically
Specify an IP address:
IP Address:
Subnet Mask:
OK
Cancel

Figure 3-4

6. At this time, Windows may prompt you to reboot your computer to make the changes taken effect (*Figure 3-5*). Click **Yes** to proceed.

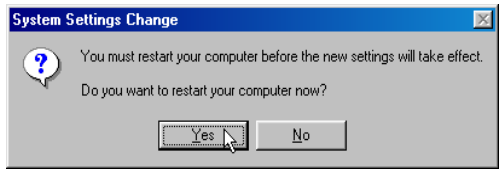

System Settings Change
You must restart your computer before the new settings will take effect.
Do you want to restart your computer now?
Yes
No

Figure 3-5

Your system is now ready to communicate with your BritePort 8120.

Configuring Windows 2000/XP for Dynamic IP Address

1. From your Windows 2000 or XP desktop, click **Start** -> **Settings** -> **Network and Dial-up Connections** -> **Local Area Connection**, as shown in *Figure 3-6*.

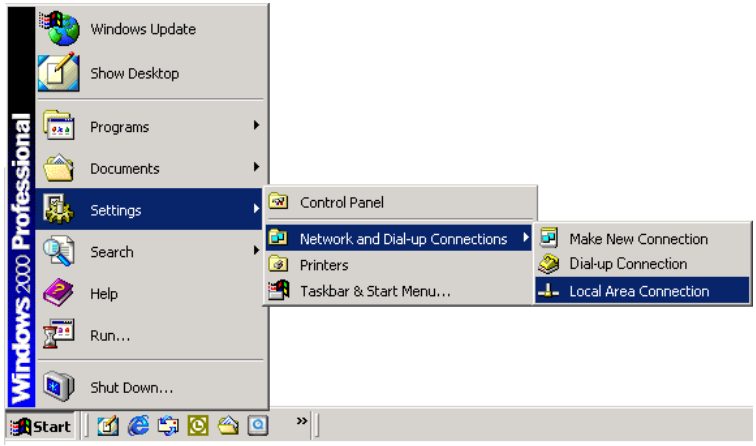


Figure 3-6

Click **Local Area Connection**, and then **Properties** to bring out the "Local Area Connection Properties" dialog box.

Note:
If you do not see **Local Area Connection**, then go to **Start** -> **Settings** -> **Network and Dial-up Connections**. Click on **Network and Dial-up Connections** will bring out the "Network and Dial-up Connections" window.

In the "Network and Dial-up Connections" window, select and right-click the **Local Area Connection** icon, and click the **Properties** option will open the "Local Area Connection Properties" dialog box.

2. In the "Local Area Connection Properties" dialog box, similar to *Figure 3-7*, under the list box, "Components checked are used by this connection", select **Internet Protocol (TCP/IP)** and click **Properties** to continue.

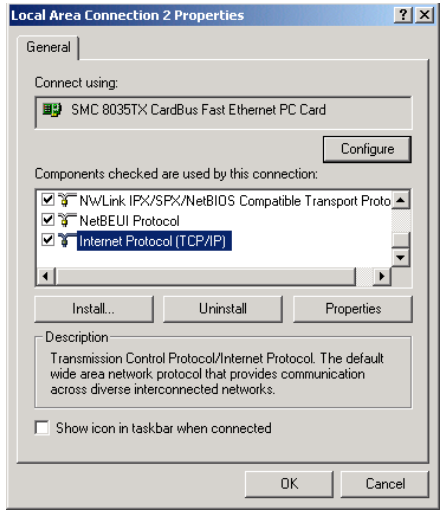


Figure 3-7

3. Then the "Internet Protocol (TCP/IP) Properties" dialog box appears, similar to the one shown in *Figure 3-8*.
   Select the option **Obtain an IP address automatically** and **Obtain DNS server address automatically**, and Click **OK** to confirm the setting.

   The "Local Area Connection Properties" dialog box appears active again. Click **OK** to close the dialog box.

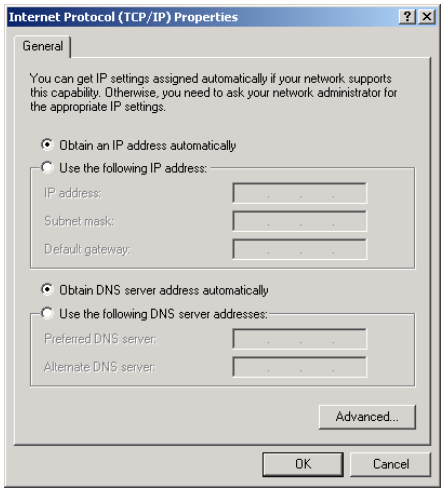

Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
Subnet mask:
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

Figure 3-8

4. At this time, Windows may prompt you to reboot your computer to make the changes taken effect. Click **Yes** to proceed with the system reboot.

Your system is now ready to communicate with your BritePort 8120.

Important Note:

- To manually specify the IP address and Subnet Mask of your computer Network Properties in order to access your BritePort 8120 web-based configuration tool, please refer to ***Appendix B: Troubleshooting -- A. Possible Problems*** for detail.
- Follow the instructions provided in this section to also set up all of your network computers to obtain an IP address automatically for DSL connection through your BritePort 8120. For instructions on setting up your network computers for Static IP address, please refer to ***Appendix C: Frequently Asked Questions***.

Configuring Your BritePort for PPPoE or PPPoA

This is the most common setup. Your DSL service provider should have provided you with the PPPoE username and password.

Logging On To The Configuration Tool

1. Start the Web browser. In the URL **Address** field of the browser window, type **192.168.1.1** and press **Enter**. This will take you to the login screen of the Web-based configuration tool for your BritePort 8120. (*Figure 3-9*)

   To login for the first time, your default username is "admin", and the corresponding password is also "admin", with all in lowercase letters.

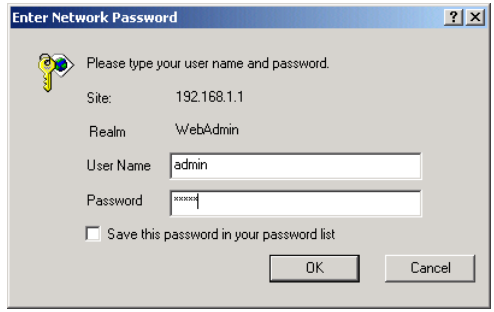


Figure 3-9

Note: Make sure you type the correct information to the **User Name** and **Password** fields. The login information is case sensitive.

2. The successful login will open the web-based configuration tool of BritePort 8120. The first screen that you will see is the welcome screen similar to *Figure 3-10*.

BRITEPORT 8120
Wizard Setup
Status
Advanced Setup
Maintenance
Welcome to the Broadxent BritePort 8120
Web-based DSL configuration
Please click on the Wizard Setup link in the main menu located in the left frame.
The Wizard Setup will lead you through the DSL Gateway configuration.
Advanced users may click on the Advanced Setup or Maintenance links for additional options.

Figure 3-10

3. Click the **Wizard Setup** to open the "Wizard Setup" page, similar to *Figure 3-11*. Select **I have a PPPoE username and password** or **I have a PPPoA username and password** and click **Next** to continue.

BRITEPORT 8120
Wizard Setup
Status
Advanced Setup
Maintenance
[Wizard Setup]
Setup the DSL Gateway
Welcome to the DSL Gateway Setup Wizard. Please fill in the necessary information on this and subsequent screens.
Most users should have a PPPoE or PPPoA username and password. Only select "I have a static IP address" if explicitly instructed to do so by your Internet Service Provider.
I have a PPPoE username and password
I have a PPPoA username and password
I have a static IP address
My ISP assigns an address automatically
Next

Figure 3-11

4. The "PPPoE or PPPoA Configuration" page appears, similar to *Figure 3-12*. In the corresponding fields, type the **username** and **password** was provided by your DSL service provider. Click **Next** to continue.

Figure 3-12

5. If the "Can not connect " page appears, as seen in *Figure 3-13*, please check your login information and try again, or refer to ***Appendix B: Troubleshooting*** for more information.

Figure 3-13

6. Once your user information is verified by your DSL service provider, the "DSL Gateway Setup Complete" page (see *Figure 3-14*) appears to confirm that your setup is successful. Click **Done** to complete the setup, and the **Wizard Setup** will start updating your BritePort 8120.

BRITEPORT 8120
Wizard Setup
Status
Diagnostic Test
DSL Connection
WAN Connection
Traffic Counter
Routing Table
DHCP Table
Advanced Setup
Maintenance
[Wizard Setup]
DSL Gateway Setup Complete
Your DSL Gateway is now configured.
If you've connected the DSL Gateway to the network and the "ADSL" light is illuminated green, you should be able to access the Internet after clicking the "Done" button. For further troubleshooting, please refer to the troubleshooting guide packaged with your DSL gateway.
Done

Figure 3-14

7. At this time, a dialog box may appear, similar to *Figure 3-15*, to prompt you to close your browser window. Click **Yes** to close the window, or click **No** to proceed to more configurations in **Advanced Setting**.

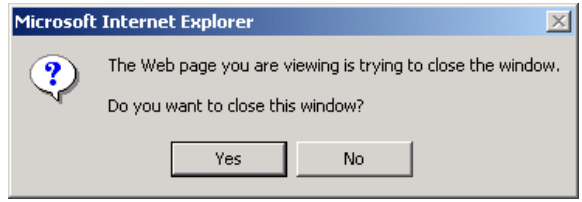

Microsoft Internet Explorer
The Web page you are viewing is trying to close the window.
Do you want to close this window?
Yes
No

Figure 3-15

Congratulations! You have successfully configured your BritePort 8120. If you have already configured your network computers for DSL connection, you may test the setup by opening your Web browser from any computer on the network to access your favorite website.

Important Notes:

- For instructions on how to configure your network computers to obtain an IP address automatically for DSL connections, please refer to the section, ***Configuring Your Computer***, in this chapter.
- If you have configured your network computers but still unable to access the website, please refer to ***Appendix B: Troubleshooting*** for the possible causes of problems you're encountering, or contact your DSL service provider for assistance.
- To further customize the settings of your BritePort 8120 using the web-based tool in order to meet the specific requirements of your LAN environment, please refer to ***Chapter 4: BritePort Configuration Tool*** for information about the **Advanced Setup**.

Configuring Your BritePort for Static IP

Depending on your LAN settings and public services that you are hosting, your DSL service may be connected through one or multiple static or fixed IP addresses. In that case, you are required to configure your BritePort 8120 using all the information provided by your DSL service provider, including IP addresses, Subnet Mask, Gateway addresses, etc. Make sure you have all the information ready before you start configuring your BritePort 8120.

Logging On To The Configuration Tool

1. Start the Web browser. In the URL **Address** field of the browser window, type **192.168.1.1** and press **Enter**. This will take you to the login screen of the Web tool for your BritePort 8120. (*Figure 3-16*)

   To login for the first time, your default username is "admin", and the corresponding password is also "admin", with all in lowercase letters.

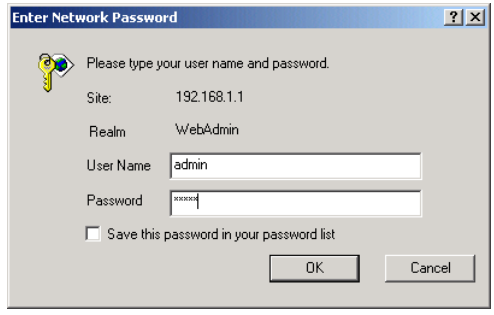


Figure 3-16

Note: Make sure you type the correct information to the **User Name** and **Password** fields. The login information is case sensitive.

2. The successful login will open the web-based configuration tool of your BritePort 8120. The first screen that you will see is the welcome screen similar to *Figure 3-17*.

BRITEPORT 8120
Wizard Setup
Status
Advanced Setup
Maintenance
Welcome to the Broadxent BritePort 8120
Web-based DSL configuration
Please click on the Wizard Setup link in the main menu located in the left frame.
The Wizard Setup will lead you through the DSL Gateway configuration.
Advanced users may click on the Advanced Setup or Maintenance links for additional options.

Figure 3-17

3. Click the **Wizard Setup** to open the "Wizard Setup" page, similar to *Figure 3-18*. Select **I have a static IP address**, and click **Next** to continue.

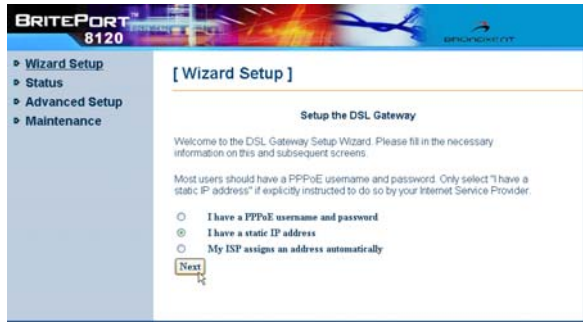

BRITEPORT 8120
Wizard Setup
Status
Advanced Setup
Maintenance
[Wizard Setup]
Setup the DSL Gateway
Welcome to the DSL Gateway Setup Wizard. Please fill in the necessary information on this and subsequent screens.
Most users should have a PPPoE username and password. Only select "I have a static IP address" if explicitly instructed to do so by your Internet Service Provider.
I have a PPPoE username and password
I have a static IP address
My ISP assigns an address automatically
Next

Figure 3-18

4. Another "Wizard Setup" page, similar to *Figure 3-19*, appears for you to enter the static IP address. In the corresponding fields, based on the information provided by your DSL service provider, enter **Local WAN IP Address**, **Primary DNS**, and **Secondary DNS**. Once complete, click **Next** to continue.

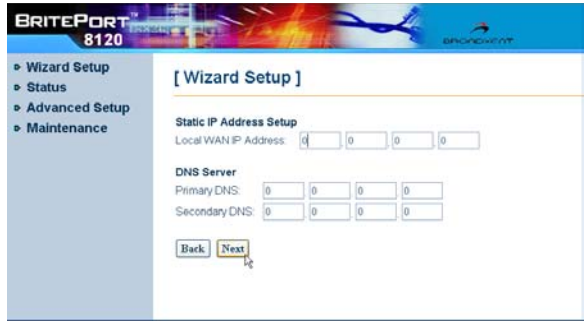


Figure 3-19

5. Once your user information is verified by your DSL service provider, the "DSL Gateway Setup Complete" page (see *Figure 3-20*) appears to confirm that your setup is successful. Click **Done** to complete the setup, and the **Wizard Setup** will start updating your BritePort 8120.

BRITEPORT 8120
Wizard Setup
Status
Diagnostic Test
DSL Connection
WAN Connection
Traffic Counter
Routing Table
DHCP Table
Advanced Setup
Maintenance
[Wizard Setup]
DSL Gateway Setup Complete
Your DSL Gateway is now configured.
If you've connected the DSL Gateway to the network and the "ADSL" light is illuminated green, you should be able to access the Internet after clicking the "Done" button. For further troubleshooting, please refer to the troubleshooting guide packaged with your DSL gateway.
Done

Figure 3-20

6. At this time, a dialog box may appear, similar to *Figure 3-21*, to prompt you to close your browser window. Click **Yes** to close the window, or click **No** to proceed more configurations in **Advanced Setting**.

Microsoft Internet Explorer
The Web page you are viewing is trying to close the window.
Do you want to close this window?
Yes
No

Figure 3-21

Congratulations! You have successfully configured your BritePort 8120. If you have already configured your network computers for DSL connections, you may test the setup by opening your Web browser from any computer on the network to access your favorite website.

Important Notes:

- For instructions on how to configure your network computers to obtain an IP address automatically for DSL connections, please refer to the section, ***Configuring Your Computer***, in this chapter.
- If you have configured your network computers but still unable to access the Website, please refer to ***Appendix B: Troubleshooting*** for the possible causes of problems, or contact your DSL service provider for assistance.
- To further customize the settings of your BritePort 8120 using the web-based tool in order to meet the specific requirements of your LAN environment, please refer to ***Chapter 4: BritePort Configuration Tool*** for information about the **Advanced Setup**.

Configuring Your BritePort for DHCP

As some DSL service providers only offer DSL connection using dynamic IP addresses, you can also simply configure your BritePort 8120 to support the setting.

Logging On To The Configuration Tool

1. Start the web browser. In the URL **Address** field of the browser window, type **192.168.1.1** and press **Enter**. This will take you to the login screen of the web-based configuration tool for your BritePort 8120. (*Figure 3-22*)

   To login for the first time, your default username is "admin", and the corresponding password is also "admin", with all in lowercase letters.

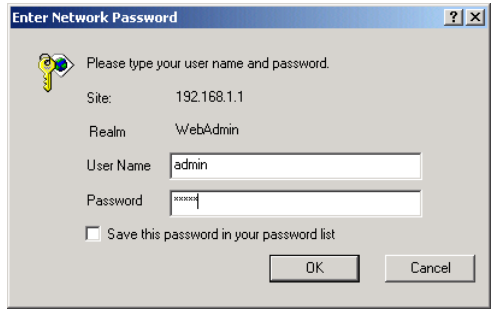


Figure 3-22

Note: Make sure you type the correct information to the **User Name** and **Password** fields. The login information is case sensitive.

2. The successful login will open the web-based configuration tool of BritePort 8120. The first screen that you will see is the welcome screen similar to *Figure 3-23*.

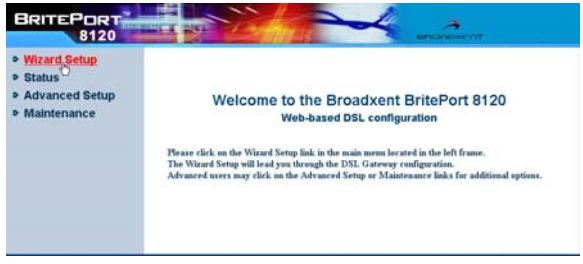

BRITEPORT 8120
Wizard Setup
Status
Advanced Setup
Maintenance
Welcome to the Broadxent BritePort 8120
Web-based DSL configuration
Please click on the Wizard Setup link in the main menu located in the left frame.
The Wizard Setup will lead you through the DSL Gateway configuration.
Advanced users may click on the Advanced Setup or Maintenance links for additional options.

Figure 3-23

3. Click the **Wizard Setup** to open the "Wizard Setup" page, similar to *Figure 3-24*. Select the **My ISP assigns an address automatically** option, and click **Next** to continue.

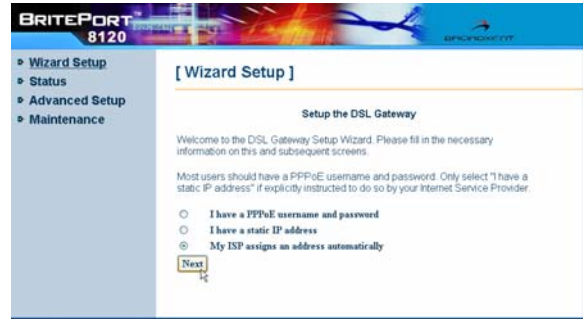

BRITEPORT 8120
Wizard Setup
Status
Advanced Setup
Maintenance
[Wizard Setup]
Setup the DSL Gateway
Welcome to the DSL Gateway Setup Wizard. Please fill in the necessary information on this and subsequent screens.
Most users should have a PPPoE username and password. Only select "I have a static IP address" if explicitly instructed to do so by your Internet Service Provider.
I have a PPPoE username and password
I have a static IP address
My ISP assigns an address automatically
Next

Figure 3-24

4. Once your user information is verified by your DSL service provider, the "DSL Gateway Setup Complete" page (see *Figure 3-25*) appears to confirm that your setup is successful. Click **Done** to complete the setup, and the **Wizard Setup** will start updating your BritePort 8120.

BRITEPORT 8120
Wizard Setup
Status
Diagnostic Test
DSL Connection
WAN Connection
Traffic Counter
Routing Table
DHCP Table
Advanced Setup
Maintenance
[Wizard Setup]
DSL Gateway Setup Complete
Your DSL Gateway is now configured.
If you've connected the DSL Gateway to the network and the "ADSL" light is illuminated green, you should be able to access the Internet after clicking the "Done" button. For further troubleshooting, please refer to the troubleshooting guide packaged with your DSL gateway.
Done

Figure 3-25

5. At this time, a dialog box may appear, similar to *Figure 3-26*, to prompt you to close your browser window. Click **Yes** to close the window, or click **No** to proceed more configurations in **Advanced Setting**.

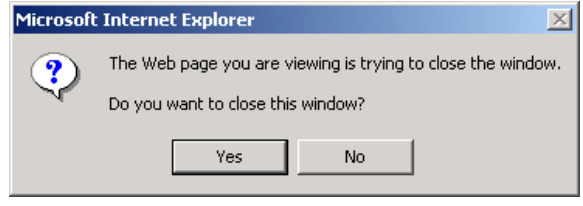

Microsoft Internet Explorer
The Web page you are viewing is trying to close the window.
Do you want to close this window?
Yes
No

Figure 3-26

Congratulations! You have successfully configured your BritePort 8120. If you have already configured your network computers for DSL connection, you may test the setup by opening your Web browser from any computer on the network to access your favorite website.

Important Notes:

- For instructions on how to configure your network computers to obtain an IP address automatically for DSL connections, please refer to the section, ***Configuring Your Computer***, in this chapter.
- If you have configured your network computers but still unable to access the website, please refer to ***Appendix B: Troubleshooting*** for the possible causes of problems you're encountering, or contact your DSL service provider for assistance.
- To further customize the settings of your BritePort 8120 using the web-based tool in order to meet the specific requirements of your LAN environment, please refer to ***Chapter 4: BritePort Configuration Tool*** for information about the **Advanced Setup**.

4. BRITEPORT CONFIGURATION TOOL

Your BritePort 8120 features a comprehensive but user-friendly web-based configuration tool. Besides the **Wizard Setup**, taking you through the initial setup process, the rest of the web tool not only provides the device and connection status, but also allows you to configure your BritePort 8120 for an advanced network configuration and management.

The web tool is consisted of four main categories: **Wizard Setup**, **Status**, **Advanced Setup**, and **Maintenance**. Each category provides different functions for and about your BritePort 8120.

This chapter introduces the advanced features of web-based configuration tool for BritePort 8120. It provides an outlook for each categories, assisting you to get familiar with their features and functions. This chapter is organized as follows:

- Wizard Setup
- Status
- Advanced Setup
- Maintenance

Note: Please review this chapter before you start to configure the **Advanced Setup** of your BritePort 8120. It is also strongly recommended that you have a good understanding about your network environment.Knowing your goals for setting up the DSL connection on your network would help you to determine what to do beyond the **Wizard Setup**.

Wizard Setup

The **Wizard Setup** (see *Figure 4-1*) takes you through the basic configuration process, based on the information that your DSL service provider supplied to you at the time of subscription. For most cases, going through the **Wizard Setup** is all you need to get your network connected for a high-speed Internet access. The configuration process is simple and user-friendly. For detail information, please refer to ***Chapter 3: BritePort Setup Wizard***.

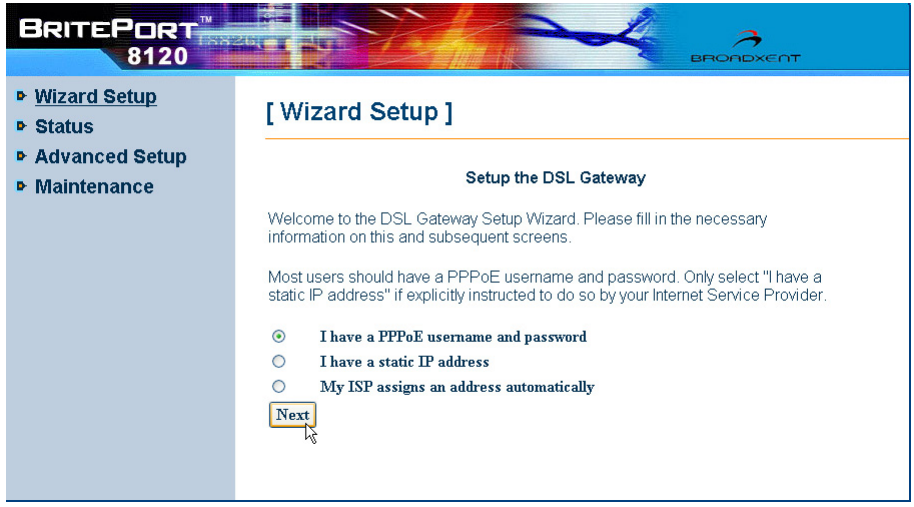

BRITEPORT 8120
BROADXENT
Wizard Setup
Status
Advanced Setup
Maintenance
[Wizard Setup]
Setup the DSL Gateway
Welcome to the DSL Gateway Setup Wizard. Please fill in the necessary information on this and subsequent screens.
Most users should have a PPPoE username and password. Only select "I have a static IP address" if explicitly instructed to do so by your Internet Service Provider.
I have a PPPoE username and password
I have a static IP address
My ISP assigns an address automatically
Next

Figure 4-1

Status

The **Status** provides valuable information about your BritePort 8120 and your DSL service setup. It is consisted of **System Status**, **Diagnostic Test**, **DSL Connection**, **WAN (Wide Area Network) Connection**, **Traffic Counter**, **Routing Table**, and **DHCP Table**. Besides the main "System Status" page, while you are in the **Status** section, all pages are automatically refreshed approximately every 30 seconds.

System Status

The main "System Status" page lists the **Product Information**, **WAN Information**, and **LAN (Local Area Network) Information**, similar to *Figure 4-2*.

This information reflects the current settings of your BritePort 8120 and the DSL connection. All data is read-only.

Located at the bottom of the "System Status" page, there is a **Status Log** button. Click the button to view the recent history of the DSL connection logs between your BritePort 8120 and your DSL service provider. (see *Figure 4-3*) A new log is generated every time when the **System Status** information is refreshed.

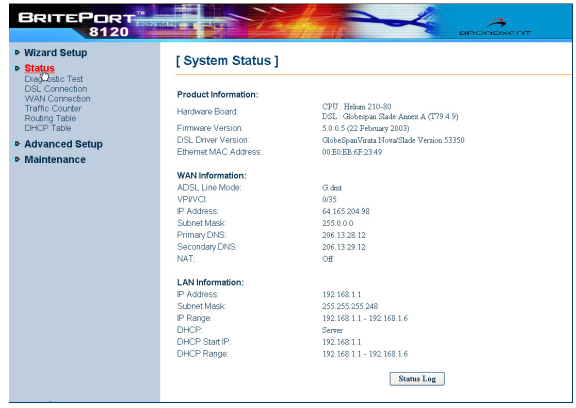


Figure 4-2

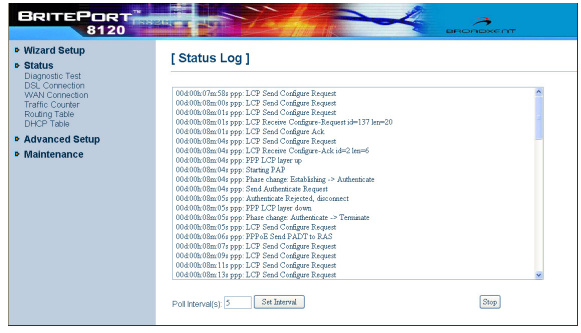


Figure 4-3

Diagnostic Test

The **Diagnostic Test** allows you to ping the **Default Gateway** and **Primary DNS** as well as testing the connections of your BritePort 8120 to both LAN and WAN networks. This feature provides the convenience for troubleshooting when you work with a complex LAN environment and/or are required to manage your DSL network at a remote location. Running the **Diagnostic Test** will help you to identify the possbile causes of your DSL network problems.

Refer to *Figure 4-4*, to run the test, click the **Test** button next to each category. The test result will show under the **Result** column.

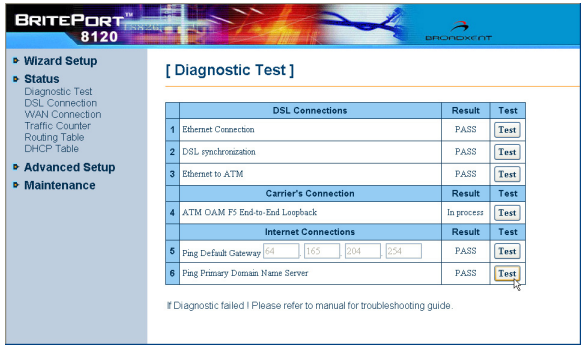


Figure 4-4

Note: This **Diagnostic Test** does not relate to the function of **DIAG** LED indicator located at the front panel of your BritePort 8120.

DSL Connection

The **DSL Connection** provides the basic technical details about the DSL communication between your DSL service provider to your BritePort 8120. The data is generated based on the **Current DSL Line Mode**, which is set in **DSL Configuration** under the **Advanced Setup**. Information shown in the table includes **Speed**, **Latency**, **CRC Error**, **Up Time**, etc, as similar to *Figure 4-5*.

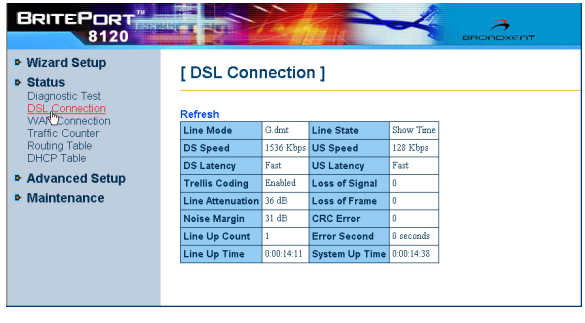


Figure 4-5

The data is automatically refreshed about every 30 seconds. You can also manually click **Refresh** to view the most updated information at anytime.

WAN Connection

The **WAN Connection** provides information about the type of WAN data encapsulation is used between your BritePort 8120 and the DSL service provider. The page, similar to *Figure 4-6*, also provides other information such as **Local WAN IP** and **VPI/VCI** values.

Similar to other pages under **Status**, all data on the "WAN Connection" page is periodically auto-refreshed, about every 30 seconds. You can also manually click **Refresh** to view the updated information.

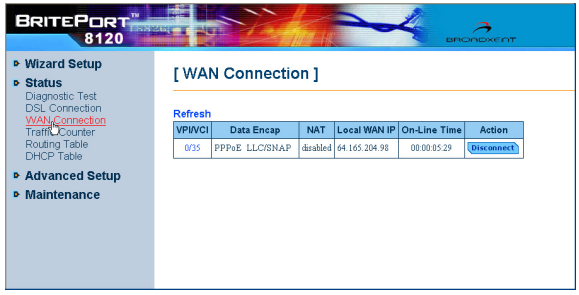


Figure 4-6

VPI/VCI

Most information on the "WAN Connection" page is read-only except the **VPI/VCI** value. To revise the values, click the value link under the **VPI/VCI** column. This will open the "Modify ATM PVC" page, which is linked to the "WAN Configuration (WAN)" page in **Advanced Setup**. (see *Figure 4-7*) You can modify **ATM Properties** and **IP Configuration** for your DSL connection.

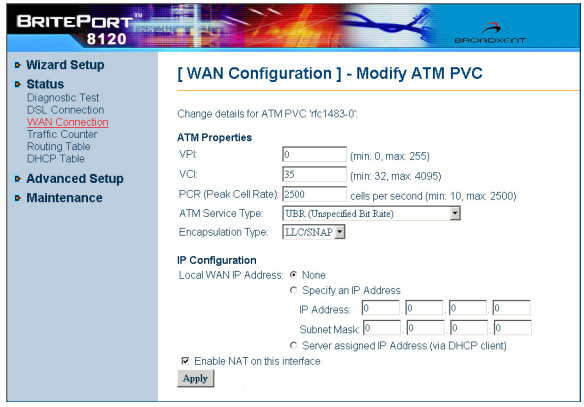


Figure 4-7

However, unless instructed by your DSL service provider, you should not change the values. Changing the VPI/VCI values without first consulting your DSL service provider will cause your DSL connection being interrupted.

Traffic Counter

The **Traffic Counter** provides the data access statistic of your BritePort 8120. It shows the transmitted and received packets and bytes over the LAN and WAN connections. The data shown on the "Traffic Counter" page (see *Figure 4-8*) is read-only, and similar to other pages under **Status**, the information is automatically refreshed about every 30 seconds. You can also manually click **Refresh** to update the data.

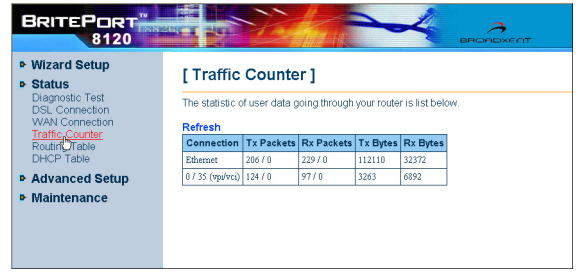

BRITEPORT 8120
Wizard Setup
Status
Diagnostic Test
DSL Connection
WAN Connection
Traffic Counter
Routing Table
DHCP Table
Advanced Setup
Maintenance
[Traffic Counter]
The statistic of user data going through your router is list below.
Refresh
Connection | Tx Packets | Rx Packets | Tx Bytes | Rx Bytes
Ethernet | 206 / 0 | 229 / 0 | 112110 | 32372
0 / 35 (vpi/vci) | 124 / 0 | 97 / 0 | 3263 | 6892

Figure 4-8

Routing Table

The **Routing Table** provides information on routing rules set for your BritePort 8120. All information on this page (see *Figure 4-9*) is read-only. Your BritePort 8120 supports both static and dynamic routing. You can add, edit, or delete the routing rules in the "IP Route" page under **Advanced Setup**. (see *Figure 4-19* and *Figure 4-20*)

Similar to other pages under **Status**, the data is periodically auto-refreshed. You can also click on **Refresh** to manually update the information.

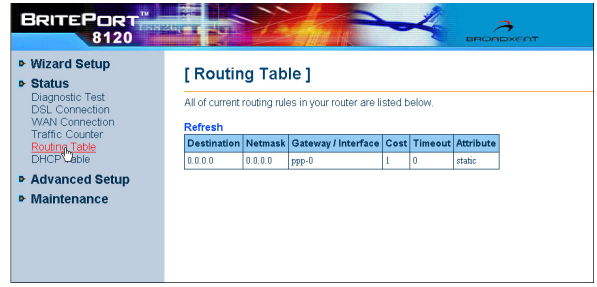


Figure 4-9

DHCP Table

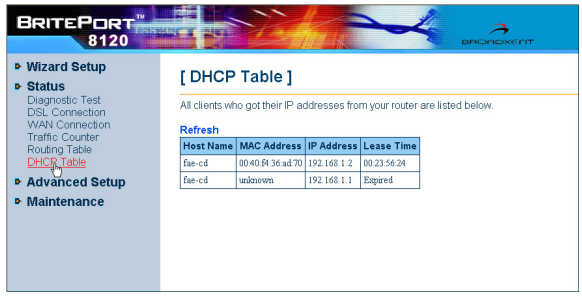


Figure 4-10

The **DHCP Table** lists all client computers that are currently getting DSL connections through your BritePort 8120 via DHCP. The table, similar to *Figure 4-10*, provides information on **Host Name**, **MAC Address**, **IP Address**, and **Lease Time** for each client computer. The **Host Name** is the name of the client computer on your DSL LAN. The **Lease Time** shows the duration of the dynamic IP address being assigned to the client computer.

Information shown in the **DHCP Table** is read-only information. As other pages under **Status**, all data is periodically auto-refreshed. You can also click on **Refresh** to manually update the table.

Advanced Setup

The **Advanced Setup** provides features allowing you to further configure your BritePort 8120 as well as the DSL connections for a more complex network environment. Functions available under the **Advanced Setup** include **Administration**, **DSL Configuration (DSL)**, **LAN Configuration (LAN)**, **WAN Configuration (WAN)**, **IP Route**, **DNS**, **Application Control**, **Internet Security**, **NAT Application**, and **UPnP**.

Note: The **Advanced Setup** is created for advanced users who have in-depth knowledge about network configurations. If you are not familiar with the provided functions, please consult with your DSL service provider before making any changes to the default settings.

Administration

The "Administration" page is consisted of **Account**, **Remote Management**, and **Web Port**. To view each function, click the blue title bar to open the page.

Administration Account

You can change your login information in the "Administration Account" page. (see *Figure 4-11*) Simply type your preferred **User Name** and **Password** in the corresponding field to change the login information. Click **Apply** to confirm the changes. To protect your BritePort 8120 settings, you should change the administrator's username and password after your first login.

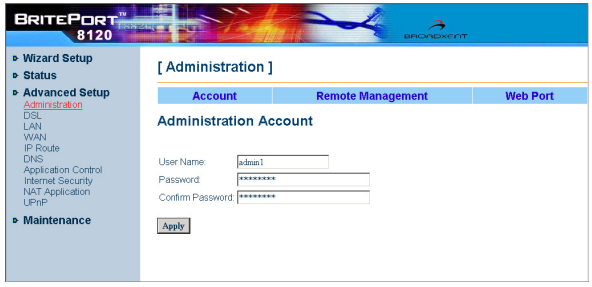


Figure 4-11

Remote Management Control

This function allows you to establish access to manage your DSL network while you are at a remote location. (see *Figure 4-12*) Depending on your remote managment needs, you can define the time for each remote session, the access protocol, as well as the authorized remote IP for a secure remote access. To set the authorized remote IP, click **Secured Remote Client IP** to bring out the "Secure Remote Client IP" window to set the authorized client IP address and Subnet Mask. Click **Apply** to confirm the setup.

Figure 4-12

Web Port

The default web server port for your BritePort 8120 is Port 80. Refer to *Figure 4-13*, to change the port setting, simply type the new port number and click **Apply** to store the new setting. However, clicking **Apply** will not execute the change. To activate the new setting, you must go to **Save Configuration**, under **Maintenance**, save the settings and restart your BritePort 8120 unit.

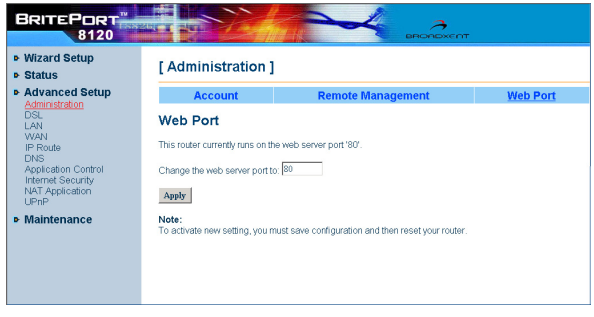


Figure 4-13

DSL Configuration (DSL)

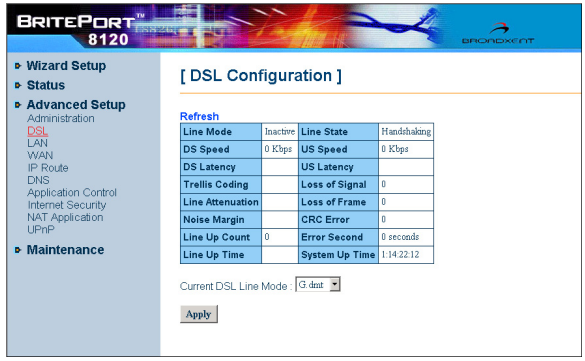

BRITEPORT 8120
Wizard Setup
Status
Advanced Setup
Administration
DSL
LAN
WAN
IP Route
DNS
Application Control
Internet Security
NAT Application
UPnP
Maintenance
[DSL Configuration]
Refresh
Line Mode | Inactive | Line State | Handshaking
DS Speed | 0 Kbps | US Speed | 0 Kbps
DS Latency | | US Latency |
Trellis Coding | | Loss of Signal | 0
Line Attenuation | | Loss of Frame | 0
Noise Margin | | CRC Error | 0
Line Up Count | 0 | Error Second | 0 seconds
Line Up Time | | System Up Time | 1:14:22:12
Current DSL Line Mode : G.dmt
Apply

Figure 4-14

DSL Configuation allows you to change the **Current DSL Line Mode**. The default line mode is G.dmt. To change the setting, click and select a different Line Mode from the drop-down box. Click **Apply** to confirm the new setting. Once the DSL Line Mode is changed, information in the "DSL Configuration" table, similar to *Figure 4-14*, such as the **DS Speed** (Downstream Speed) and **US Speed** (Upstream Speed) will also change reflecting the new setting. Data in the "DSL Configuration" table is also linked to the "DSL Connection" page under **Status**. (see *Figure 4-5*)

Note: You should not change the default **Current DSL Line Mode** unless instructed by your DSL Service Provider.

LAN Configuration (LAN)

The "LAN Configuration" page is consisted of **IP Address** and **DHCP Server**. In the blue title bar, select the item that you wish to configure.

IP Address

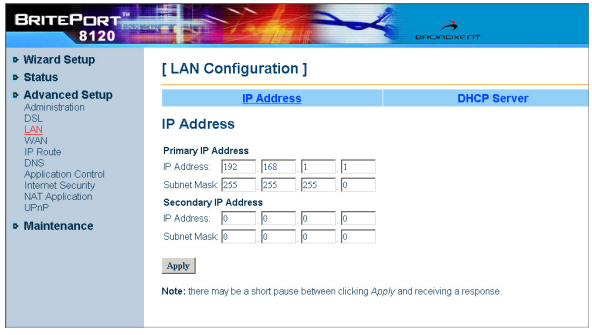


Figure 4-15

The "IP Address" page shows the current IP address assigned to access your BritePort 8120 web-based configuration tool. Refer to *Figure 4-15*, your BritePort 8120 supports up to two subnets -- the Primary and Secondary LAN. Typically, in a small office or a home office network environment, only one subnet, the Primary

LAN, will be used. That is, you only need the **Primary IP Address**, which is the default IP address 192.168.1.1, to access your BritePort 8120. Assign the **Secondary IP Address** to your BritePort 8120 only if you have two subnets set up on your LAN.

DHCP Server

This page allows you to configure the DHCP Server. (see *Figure 4-16*) You can select the DHCP Server to be either **Disabled** or **Enabled**. If you wish to define its **Relay Agent**, your default DHCP Server is set to be enabled.

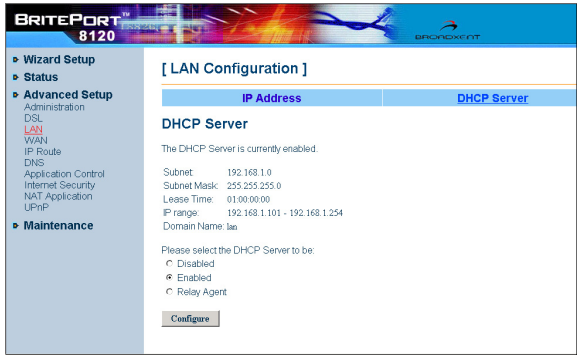


Figure 4-16

Your BritePort 8120 supports DHCP server on your Primary LAN. To configure, select the **Enabled** option and click **Configure** to open the "DHCP Server" configuration page. You can define the **Start/End IP Addresses**, **Lease Time**, **Default Gateway**, and **Domain Name Servers**. Once complete, click **Apply** to confirm all the settings.

WAN Configuration (WAN)

Information shown in **WAN Configuration** (see *Figure 4-17*) is also linked to the "WAN Connection" page under **Status**. (see *Figure 4-6*) You can modify and delete the current PVC (Permanent Virtual Circuit) and also create a new PVC. To modify a PVC, click the **Modify** link to open the "Modify ATM PVC" page, which allows you to configure the detail properties, such as **ATM Properties** and **IP Configuration**, of the selected PVC. (refer to *Figure 4-7*)

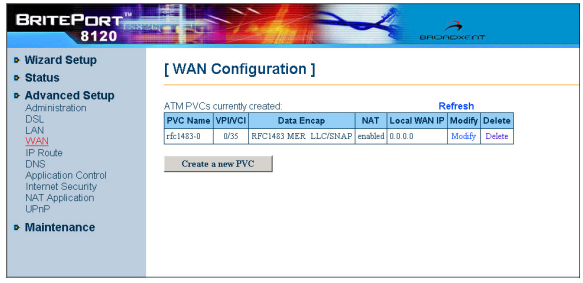


Figure 4-17

To create a new PVC, click **Create a new PVC** to open the "Create ATM PVC Connection" page similar to *Figure 4-18*, select the **Data Mode**, and click **Next** to further configure the new PVC's properties. Finally, click **Apply** to complete and confirm all the settings.

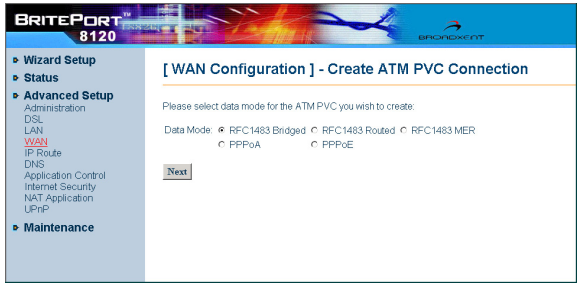


Figure 4-18

Note: Information on this page should not be altered unless instructed by your DSL service provider; otherwise, your DSL connection will be interrupted.

IP Route

The IP Route defines the routing rules of your BritePort 8120. You may need to configure the **IP Route** when you are working with more than one network groups. Your BritePort 8120 supports both **Static** and **Dynamic Routing**. A **Static Routing** defines a pre-determined pathway for data flow to reach a specific host or network, while a **Dynamic Routing**, using RIP protocol, enables your BritePort 8120 to automatically adjust to the physical changes of your LAN layout.

Static Route

The default static routing for your BritePort 8120 is 0.0.0.0. You can delete and/or add a **Static Route** based on the settings of your DSL network environment. To add a **Static Route**, click the **Create a new route** button to open the "Create New Route" page, similar to *Figure 4-19*. Click **Apply** to confirm the changes once complete. The new configuration will also appear on the "Routing Table" page under **Status**. (see *Figure 4-9*)

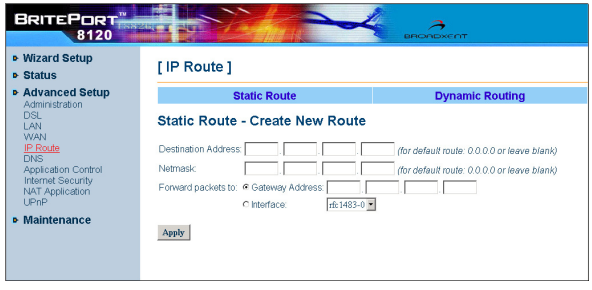


Figure 4-19

Dynamic Routing

The "Dynamic Routing" page provides the routing table that lists the current settings, including **Interface Name**, **Receive Mode**, and **Transmit Mode**. The default mode is set to have RIP disabled. Refer to *Figure 4-20*, use the drop-down box to select the Interface Name and the desired RIP setting for each interface. Finally, click **Apply** to confirm all the settings.

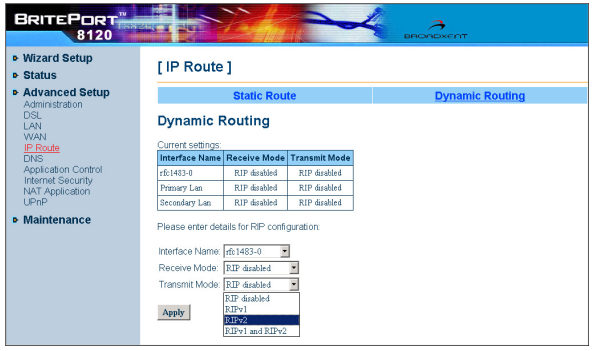


Figure 4-20

DNS

The "DNS" page allows you to configure the **DNS Relay** and **DNS Server** for your DSL network.

DNS Relay

The "DNS Relay" page, similar to *Figure 4-21*, allows you to **Disable** or **Enable** the DNS Relay. If **Enabled** is selected, you can click **Configure** to open the "DNS Relay" configuration page.

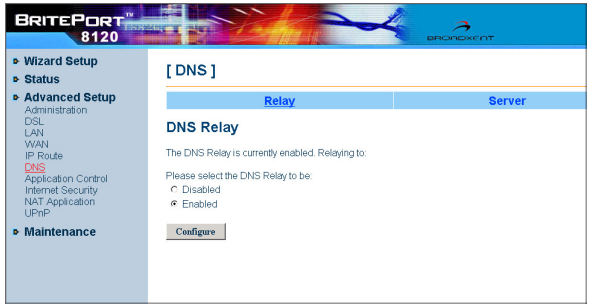


Figure 4-21

In the "DNS Relay" configuration page, type the **DNS server IP address** in the corresponding fields (see *Figure 4-22*), and click **Apply** to complete the changes. Your DSL service provider should provide you at least one DNS Server IP address if your DSL connection is via a static or fixed IP address. BritePort 8120 supports up to 3 DNS Server IP addresses.

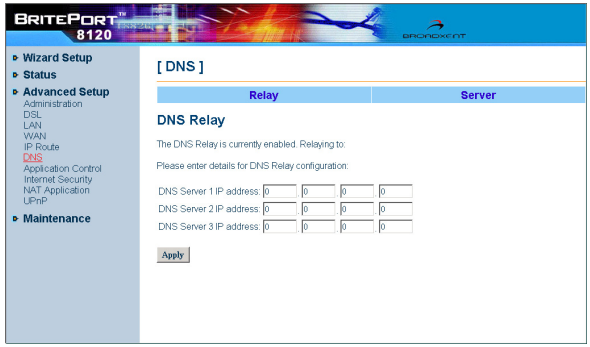


Figure 4-22

DNS Server

Refer to *Figure 4-23*, this "DNS Server" page allows you to **Disable** or **Enable** the DNS server. It also lets you manually create a new DNS hostname. To do so, click **Create a new DNS hostname entry manually** to open the "Create New Hostname Entry" page. Enter the Hostname and IP Address, and click **Apply** to confirm the settings. The newly added DNS hostname will appear on the "DNS hostname" table as seen on *Figure 4-23*.

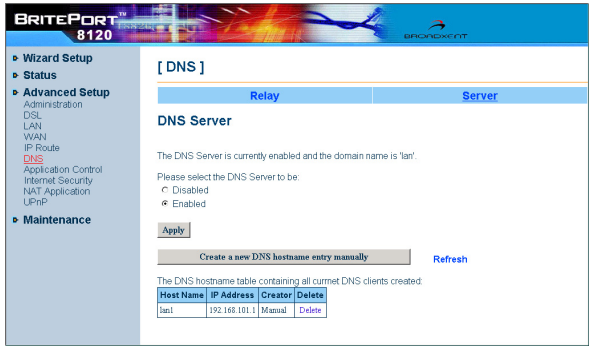


Figure 4-23

Application Control

The **Application Control** allows you to set up the **LAN to WAN Firewall** and **Intrusion Detection** through packet filtering.

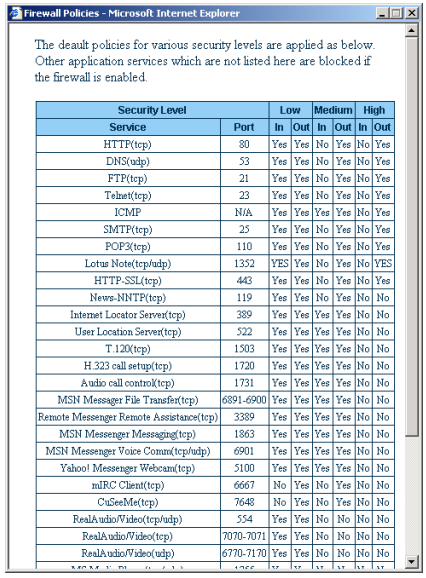
LAN to WAN Firewall

Refer to *Figure 4-24*, select the firewall level for your DSL network, and click **Apply** to confirm your selection. If you select the **Advanced (User Define)** option, the page will be refreshed and appear with the options for you to further configure the packet filtering rules **between WAN and Primary LAN** or **between WAN and Secondary LAN**.

Figure 4-24

Note:
This feature is for advanced users who have in-depth knowledge about network configuring. Enable the setting only if you would like to apply packet filtering rules from your LAN to WAN or in between the two subnetworks on your LAN.

To find out your BritePort 8120's default policies of filtering rules for various security levels, click the **The table of default policies for various security levels** link located at the bottom of the "Application Control" page to open the "Firewall Policies" window similar to *Figure 4-25*.


Firewall Policies - Microsoft Internet Explorer
The deault policies for various security levels are applied as below.
Other application services which are not listed here are blocked if the firewall is enabled.

Security Level		Low		Medium		High	
Service	Port	In	Out	In	Out	In	Out
HTTP(tcp)	80	Yes	Yes	No	Yes	No	Yes
DNS(udp)	53	Yes	Yes	No	Yes	No	Yes
FTP(tcp)	21	Yes	Yes	No	Yes	No	Yes
Telnet(tcp)	23	Yes	Yes	No	Yes	No	Yes
ICMP	N/A	Yes	Yes	Yes	Yes	No	Yes
SMTP(tcp)	25	Yes	Yes	No	Yes	No	Yes
POP3(tcp)	110	Yes	Yes	No	Yes	No	Yes
Lotus Note(tcp/udp)	1352	YES	Yes	No	Yes	No	YES
HTTP-SSL(tcp)	443	Yes	Yes	No	Yes	No	Yes
News-NNTP(tcp)	119	Yes	Yes	No	Yes	No	No
Internet Locator Server(tcp)	389	Yes	Yes	Yes	Yes	No	No
User Location Server(tcp)	522	Yes	Yes	Yes	Yes	No	No
T.120(tcp)	1503	Yes	Yes	Yes	Yes	No	No
H.323 call setup(tcp)	1720	Yes	Yes	Yes	Yes	No	No
Audio call control(tcp)	1731	Yes	Yes	Yes	Yes	No	No
MSN Messager File Transfer(tcp)	6891-6900	Yes	Yes	Yes	Yes	No	No
Remote Messenger Remote Assistance(tcp)	3389	Yes	Yes	Yes	Yes	No	No
MSN Messenger Messaging(tcp)	1863	Yes	Yes	Yes	Yes	No	No
MSN Messenger Voice Comm(tcp/udp)	6901	Yes	Yes	Yes	Yes	No	No
Yahoo! Messenger Webcam(tcp)	5100	Yes	Yes	Yes	Yes	No	No
mIRC Client(tcp)	6667	No	Yes	No	Yes	No	No
CuSeeMe(tcp)	7648	No	Yes	No	Yes	No	No
RealAudio/Video(tcp/udp)	554	Yes	Yes	No	No	No	No
RealAudio/Video(tcp)	7070-7071	Yes	Yes	No	No	No	No
RealAudio/Video(udp)	6770-7170	Yes	Yes	No	No	No	No

Figure 4-25

Intrusion Detection

Figure 4-26

The "Intrusion Detection" page (see *Figure 4-26*) allows you to either **Disable** or **Enable** the function. Simply click your desired option and click **Apply** to confirm your selection. Enabling the **Intrusion Detection** will protect your DSL network from unauthorized access. If you are not sure how this function works, please contact your DSL service provider for more information.

Internet Security

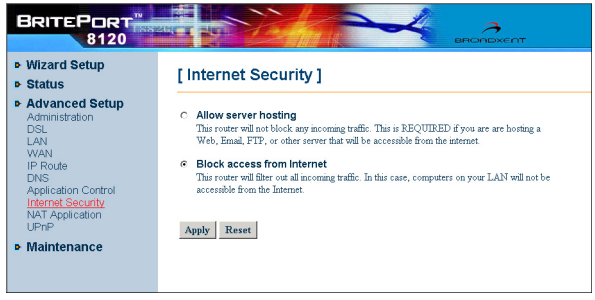

BRITEPORT 8120
Wizard Setup
Status
Advanced Setup
Administration
DSL
LAN
WAN
IP Route
DNS
Application Control
Internet Security
NAT Application
UPnP
Maintenance
[Internet Security]
Allow server hosting
This router will not block any incoming traffic. This is REQUIRED if you are are hosting a Web, Email, FTP, or other server that will be accessible from the internet.
Block access from Internet
This router will filter out all incoming traffic. In this case, computers on your LAN will not be accessible from the Internet.
Apply
Reset

Figure 4-27

Refer to *Figure 4-27*, the default setting for the **Internet Security** is **Block all access from the Internet** to your network, which is generally selected when you obtain only one IP address from your DSL service provider. You should only change the setting to **Allow server hosting** when you subscribe multiple IP addresses especially for hosting services, such as hosting a Web server, FTP, mail server, or gaming server.

NAT Application

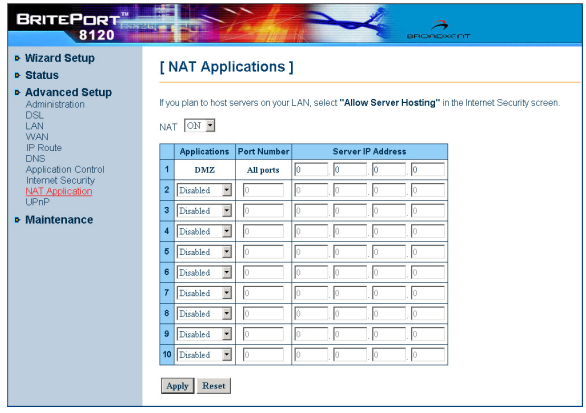


Figure 4-28

The "NAT Applications" page, similar to *Figure 4-28*, provides a table for you to set up public services on your network, such as Web servers, FTP servers, e-mail servers, and/or other specialized Internet applications that use Internet access to perform functions such as videoconferencing. To activate this feature, you are required to subscribe at least one static (or fixed) IP address from your DSL serivce provider and must select **Allow server hosting** in the "Internet Security" page.

To configure, select your service from the drop-down box under the **Applications** column. Based on your selection, the default **Port Number** will appear. You may also manually enter or revise the **Port Number** if needed. Then, type the fixed **Server IP address** for the hosting computer. Finally, click **Apply** to confirm your settings.

Activating your setup defined in the **NAT Application** table will trigger the port forwarding function of your BritePort 8120. That is, once your BritePort 8120 receives requests, via the DSL connection, for a specific NAT Application, your BritePort 8120 will automatically forward the requests to the appropriate hosting computer within your LAN.

Your BritePort 8120 supports up to 9 **NAT Applications** plus 1 **DMZ** (demilitarized zone) for port forwarding. The **DMZ** allows you to expose all ports of one LAN computer to the Internet. This feature is especially important when you want to host services such as the Internet gaming and videoconferencing -- allowing a large number of users to access the service simultaneously.

UPnP

Your BritePort 8120 supports UPnP (Universal Plug and Play) IGD (Internet Gateway Device) function. It uses standardized protocols and provides you the convenience to integrate your DSL connection with other applications or devices such as Windows Messenger with voice & video function. Refer to *Figure 4-29*, the default setting for UPnP IGD is disabled. To enable the function, simply click the **Enable UPnP IGD Function** option.

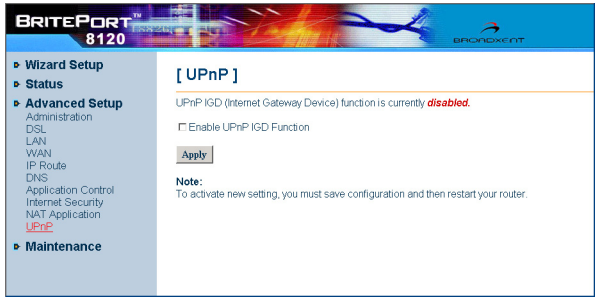


Figure 4-29

To execute and activate the new configuration, it is very important that you save all the changes. To do so, go to **Maintenance**, select **Save Configuration**, and click **Save** to save all the changes and restart your BritePort 8120 web configuration tool.

Maintenance

The **Maintenance** section provides basic to advanced supporting features to your BritePort 8120. It is consisted of **Backup Configuration**, **Save Configuration**, **Upgrade Firmware**, and **Reset Router**.

Backup Configuration

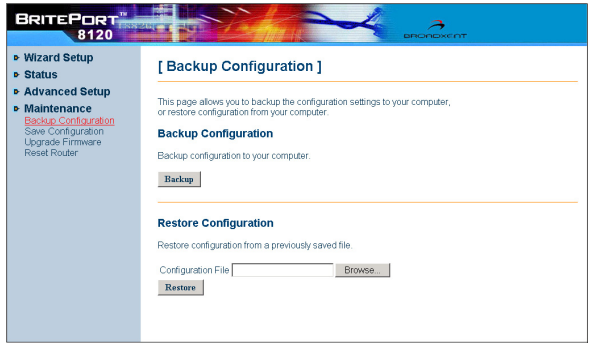


Figure 4-30

Refer to *Figure 4-30*, you can simply backup and restore your BritePort 8120 configuration to your computer. To backup, click the **Backup** button once. A "File Download" dialog box will appear to notify you for the file download. Select **Save this file to disk** and click **OK** to proceed with the process. This will save all the basic & advanced settings of your BritePort 8120 to the backup location. The default file name for the backup configuration is ***MyConfiguration.conf***. You can change the file name if necessary.

To restore the configuration, browse to locate the backup file and then click the **Restore** button once to begin the restoration.

Save Configuration

Click **Save** to save the current configuration of your BritePort 8120 to the unit's memory. (see *Figure 4-31*) You should always perform **Save Configuration** everytime when you change the settings to properly update your BritePort 8120.

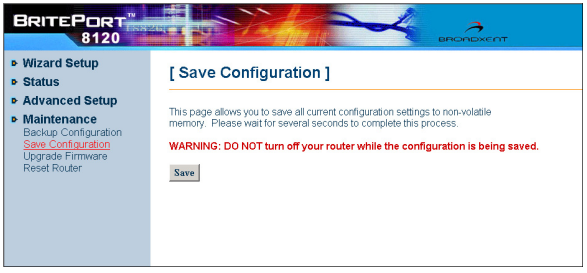

BRITEPORT 8120
Wizard Setup
Status
Advanced Setup
Maintenance
Backup Configuration
Save Configuration
Upgrade Firmware
Reset Router
[Save Configuration]
This page allows you to save all current configuration settings to non-volatile memory. Please wait for several seconds to complete this process.
WARNING: DO NOT turn off your router while the configuration is being saved.
Save

Figure 4-31

Note: It is very important that you do NOT turn off your BritePort 8120 while the saving is in progress.

Upgrade Firmware

This page displays the current firmware version of your BritePort 8120. Check the product website once in a while to see if any firmware upgrade is available. To upgrade the firmware, you should first download the new firmware from the Internet and then browse to locate the file. Finally, click **Upgrade** to begin the updating process. (see *Figure 4-32*)

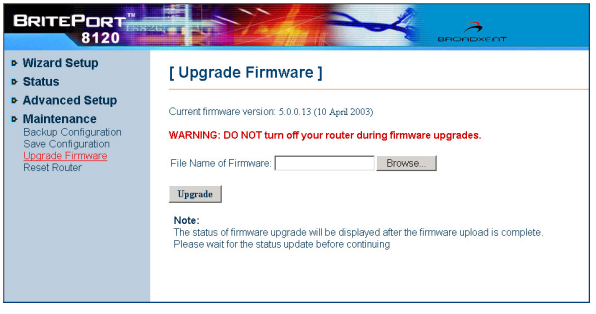


Figure 4-32

Note: It is very important that you do NOT turn off your BritePort 8120 during firmware upgrade.

Reset Router

This function allows you to set your BritePort 8120 back to the factory default settings; that is, all the current settings of your BritePort 8120 will be erased. You can not undo this function; therefore, please ensure you definitely need to do so.

To reset, check the **Reset to factory default settings** box and click **Restart**. (see *Figure 4-33*) This will reset your BritePort 8120 configuration to the factory default. As soon as the reset process is done, your BritePort 8120 will be automatically rebooted/ restarted. Once complete, the "Welcome" page of web tool will appear indicating that the reset/restart process is successful.

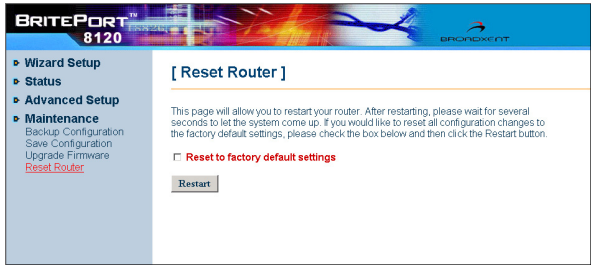

BRITEPORT 8120
Wizard Setup
Status
Advanced Setup
Maintenance
Backup Configuration
Save Configuration
Upgrade Firmware
Reset Router
[Reset Router]
This page will allow you to restart your router. After restarting, please wait for several seconds to let the system come up. If you would like to reset all configuration changes to the factory default settings, please check the box below and then click the Restart button.
Reset to factory default settings
Restart

Figure 4-33

A. SPECIFICATIONS

This section provides basic technical specifications for the Broadxent BritePort DSL Gateway 8120:

Data Encapsulation Protocol:

- RFC 1483 Bridged Ethernet over ATM over DSL
- NAT + RFC 1483/RFC 2684 Bridged
- RFC 2364 PPP-over-ATM Routed (PPPoA)
- RFC 2516 PPP-over-Ethernet Routed (PPPoE)

ADSL Line Interface:

- ANSI T1.413 Issue 2
- ITU G.992.1 (G.DMT)
- ITU G.992.2 (G.LITE)

Electrical:

- AC Adapter
  Input 100~240VAC, 50~60Hz
  Output 12VDC, 1A

Interface:

- Ethernet 10/100Base-T (LAN)
- RJ-11 (PHONE/DSL)

Dimensions:

- Length: 155 mm (approx. 6.1 inches)
- Width: 43 mm (approx. 1.7 inches)
- Height: 216 mm (approx. 8.5 inches)
- Weight: 540 g

B. TROUBLESHOOTING

This appendix provides tips and solutions for resolving some of the problems that you may encounter while setting, installing, or using Broadxent BritePort DSL Gateway 8120:

A. Possible Problems

1) BritePort 8120 is not recognized by the Ethernet port on my computer

Cause 1. The Ethernet card on your computer may be faulty or the driver is not properly installed.

2. BritePort 8120 is not connected properly or the Ethernet configuration is improper.

Solution Try the following:

- Make sure that the straight Ethernet cable is securely connected between the Ethernet port on 8120 and the Ethernet card on your PC. Do not use crossed Ethernet cable.
- Try another straight Ethernet cable.
- If your BritePort is connected through a hub with Normal port, be sure that you have used a crossed Ethernet cable, however if the hub has Uplink port, then use straight Ethernet cable.
- Make sure that you have properly installed the driver for your Ethernet card. Each Ethernet card comes with its own driver.
- Reconfigure your computer for DSL connection, as per the information provided by your service provider.

2) Telephone line is noisy

Cause You may hear slight noise on your telephone while the BritePort 8120 is in operation. If the noise level becomes too loud and disrupts your telephone conversations, try the solutions as indicated below.

Solution Try the following:

- Ensure that each analog device such as a telephone, fax machine, and answering machine, sharing the same telephone line as your BritePort 8120, is connected to the telephone wall socket via an independent microfilter.
- Check if you have connected the microfilters properly.
- If your service provider has installed a splitter, do not use the microfilters.

3) BritePort does not connect to the Internet or the DSL LED is not on or keeps on flashing

Cause You did not connect your BritePort correctly and securely.

Solution Try the following:

- Make sure that your telephone line has been activated for the DSL service.
- Be sure that your computer is connected to your BritePort using a straight Ethernet cable. If your BritePort is connected through a hub with Normal port, be sure that you have used a crossed Ethernet cable; however, if the hub has Uplink port, then use straight Ethernet cable.
- Be sure that the power adapter is plugged in securely and power is switched on.
- Be sure that the phone line from the wall outlet is DSL enabled and is connected securely to the DSL jack of your BritePort.
- Reconfigure your computer for DSL connection, as per the information provided by your service provider. If you are required to specify your IP address, be sure that you have typed the correct values for IP address and Subnet Mask.

4) The Internet connection is slow

Cause Your computer may not have enough cache or you must clear your cache.

Solution Try the following:

- Clear the cache on your Internet browser:

  On “Internet Explorer” window, click **Tools** menu and click **Internet Options**. On the “Internet Options” window, click the **General** tab. Then, under “History” click **Clear History** and click **Yes** to empty the cache. Also for “Days to keep pages in history:” make the adjustment according to your requirement.

  Important: Your browser automatically stores all recently visited sites on

a cache memory on your computer. Next time when you access a recently visited website, your browser immediately delivers the cached date on to the screen. You should always empty the cache on a regular basis and after a session of heavy web browsing.

- Delete temporary Internet files:

  On the Internet Explorer go to the **Internet Options** window and click the **General** tab. Under "Temporary Internet files," click **Delete Files** and click **Yes** to delete all temporary Internet files.

- Increase the cache:

  According to your requirement, you may increase the cache size. On the Internet Explorer go to the **Internet Options** window and click the **General** tab. Under "Temporary Internet files," click **Settings**. The window that appears allows you to adjust the "Amount of disk space to use" or the cache.

- Close all the open applications and reboot your computer:
  Click **Start -> Shutdown -> select Restart -> Yes**. If warm reboot is unsuccessful, shut off power to the computer and turn on after waiting for a few seconds.

5) Web browser does not connect to the BritePort's Configuration page

Cause You may not be using the correct IP address.

Solution Try the following:

- Make sure that the RJ-45 Ethernet cable that used to connect your PC to BritePort 8120 is plugged in correctly and securely.
- In the URL field (Address field) of your Web browser, make sure that you have typed the correct IP address: **192.168.1.1**.
- Check your Network Properties to ensure that the option **Obtain an IP address automatically** has been selected, or it is configured to the same Subnet Mask as the BritePort's IP address.

  Note:
  For information on how to configure your PC Network Properties to automatcially detect and obtain an IP address, please refer to ***Chapter 3: BritePort Setup Wizard***. To manually specify the IP address and Subnet Mask of your PC Network Properties in order to access the web-based

configuration tool of BritePort 8120, please refer to the following steps:

1. Click **Start** -> **Settings** -> **Control Panel**. In the "Control Panel" window, double-click the **Network** icon. In Windows 2000/XP, double-click the **Network and Dial-up Connections**, and you also need to double-click the **Local Area Connection** icon and then click the **Properties** button to see the "Local Area Connection Properties" dialog box.

2. When the "Network" dialog box similar to *Figure B-1* appears, click the **Configuration** tab. Under the "The following network components are installed" list, click your Ethernet card to highlight it, for example, **TCP/IP->Realtek RTL8139(A) PCI Fast Ethernet Adapter**. Then, click the **Properties** button to continue.

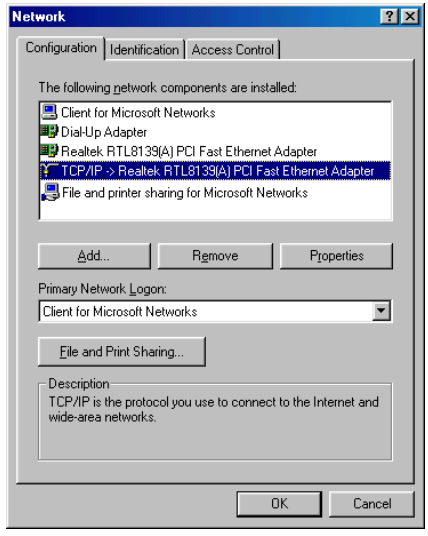


Figure B-1

Note:
For Windows 2000/XP users, instead of the "Network" dialog box, you will see the "Local Area Connection Properties" dialog box similar to *Figure B-2*. Under the list box of "Components checked are used by this connection:", select **Internet Protocol (TCP/IP)**, and then click **Properties** to open the **Internet Protocol (TCP/IP) Properties** dialog box.

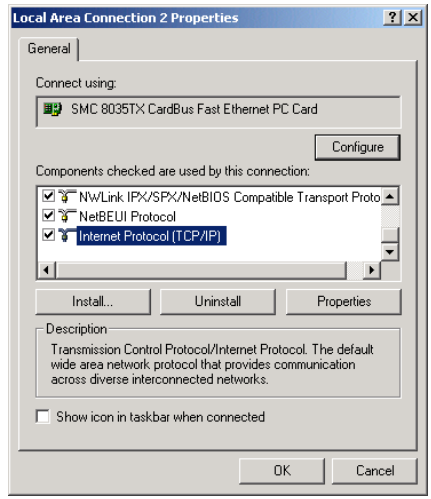


Figure B-2

3. In the "TCP/IP Properties" dialog box (*Figure B-3*), click the **IP Address** tab and make sure that IP Address is 192.168.1.x (for example, 192.168.1.2) and the Subnet Mask is **255.255.255.0**. Click **OK** to close this dialog box.

4. Again click the **OK** button on the "Network" dialog box (or "Local Area Connection Properties" dialog box for Windows 2000/XP users) to confirm the change settings.

5. Restart your computer when prompted.

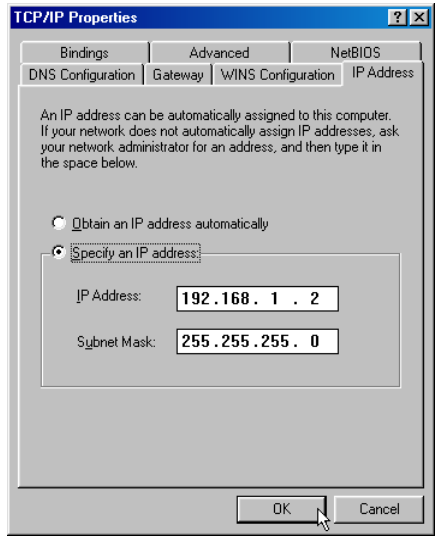


Figure B-3

B. BritePort LED Status

Observe the LEDs on your BritePort to check if the device is functioning properly.

Normal Setup Status

When your BritePort is powered up, after a few seconds, all the LEDs go into their correct states:

POWER - ON when your BritePort is connected to a power source and is switched ON.

DIAG - OFF during normal operation. The LED will be ON only when BritePort 8120 performs self-test at the initial power up.

LAN 1 to 4 - ON when an Ethernet connection is detected with no data traffic detected. The LED will blink when data traffic is detected on the Ethernet port.

DSL - ON when a DSL connection is established. The LED will flash when it is trying to establish link to the service.

C. Possible Problems

1. POWER LED on BritePort is OFF

Cause Your BritePort is not properly powered.

Solution Try the following solutions:

- Make sure that the DC power adapter is firmly plugged into both the wall outlet and your BritePort.
- Be sure to turn ON your BritePort, as well as the power outlet.

2. DIAG LED on BritePort is ON

Cause Your BritePort is performing self-diagnostic.

Solution Try the following solution:

- Wait for the self-test to complete.

- If all LEDs remain on for longer than 10 seconds, initial power up self-test has failed. Please contact technical support for assistance.

3. LAN LED on BritePort is OFF

Cause Your BritePort is not properly connected to a computer.

Solution Try the corresponding solutions:

- Ensure that both ends of the RJ-45 Ethernet cable are plugged in securely — one end to the Ethernet port of 8120 and other end to the Network Interface Card on the computer.
- Be sure that you have used a straight RJ-45 Ethernet cable. However, if you are connecting to multiple computers through a hub with Normal port, be sure that you have used a crossed Ethernet cable, however if the hub has Uplink port, then use straight Ethernet cable. Also use a straight Ethernet cable to connect your computer to the hub.
- Ensure that your Ethernet card is functioning properly and you have properly installed its driver. Each Ethernet card comes with its own driver.
- Ensure that you have configured your computer correctly according to the information provided by your DSL service provider.

4. DSL LED on BritePort is OFF or keeps on flashing

Cause Your BritePort 8120 is not properly configured/setup or your DSL service is down.

Solution Try the following solutions:

- Make sure that your telephone line has been activated for the DSL service.
- Check your telephone line for the dial-tone. If your telephone line is down, you will not have DSL service. Contact your telephone company.
- Be sure that the telephone cable is connected correctly to your BritePort.
- Try connecting again after a few minutes as external interference might have caused noise to your DSL line.
- Make sure that you've attached microfilters to all phone jacks connected to analog devices that share the same line as your DSL connection.
- Be sure that you have configured your BritePort correctly. For details, refer to *Chapter 3: Configuring your BritePort*.
- Check with your DSL service provider.

C. FREQUENTLY ASKED QUESTIONS

This section of appendix provides you answers to some frequently asked questions regarding the Broadxent BritePort DSL Gateway 8120 as well as the DSL communications in general.

1 What is DSL?

DSL is a Digital Subscriber Line technology that transforms ordinary telephone lines into high-speed digital lines for fast Internet access. This technology uses a digital coding technique to get large capacity out of your existing phone line without interfering with regular services — you can talk on your phone and at the same time surf the Web. Thus DSL provides simultaneous Internet and voice/fax capabilities over a single telephone line without any interference. DSL speeds are tied to the distance between the customer and the telco central office. Unlike ISDN, which is also digital but travels through the switched telephone network, DSL provides "always-on" operation. At the telco central office, DSL traffic is aggregated in a unit called the DSL Access Multiplexor (DSLAM) and forwarded to the appropriate ISP or data network.

Many companies have been working to develop DSL technology. This has resulted in the deployment of various types of DSL technologies, each of which has its own special characteristics. Asymmetic Digital Subscriber Line (ADSL) is commonly used for Internet access, where fast downstream is required, but slow upstream is acceptable. Symmetric Digital Subscriber Line (SDSL) provides the same amount of bandwidth upstream and downstream. For those who also require high uploading speeds, for example to connect an FTP server, SDSL may be a better choice.

2 What is ADSL?

Many different DSL technologies have been developed and Asymmetric Digital Subscriber Line (ADSL) is undoubtedly the most popular DSL technology for individuals and small businesses that require higher downstream (or download) data rates than upstream (or upload) data rates.

Asymmetric DSL shares the same line as the telephone, because it uses higher frequencies than the voice band. However, a POTS splitter must be installed on the customer's premises to separate the line between voice and ADSL. A version of ADSL, known as G.lite, Universal ADSL, ADSL Lite and splitterless ADSL, is geared to the consumer. It eliminates the splitter and associated installation charge, but all phones

on the line must plug into low-pass filters (microfilters) to isolate them from the higher ADSL frequencies.

3 What does a microfilter do?

A microfilter is installed in series with an analog device such as a telephone, fax machine, answering machine, and analog modem. It filters the regular voice band signals, i.e., the analog signals and blocks the higher frequency digital signals. Thus a microfilter enables the user to use regular phone line for voice/fax without any interference by the DSL signals. However, if your service provider has installed a splitter, do not use microfilters.

4 Which operating systems does my BritePort 8120 support?

Broadxent, Inc. makes a wide range of DSL products. Before you purchase a DSL product, you should always make sure that it supports the operating system on your computer. For example, Broadxent BritePort 8120 supports Windows 95, Windows 98, Windows Me, and Windows 2000 & XP.

5 Can I connect more than one computer to my BritePort 8120?

Yes. BitePort 8120 is equipped with 4 Ethernet Ports which allow you to directly connect up to 4 PCs with NIC card installed. You can also connect BritePort's Ethernet port to a hub, and then connect more computers to the hub. Thus you can have many computers sharing the same DSL line. To ensure that you can correctly configure the BritePort 8120 to a more complex LAN environment, it is strongly recommended that you consult your service provider technical support for details.

6 Can I connect multiple computers through a hub?

Yes, multiple computers can share the same DSL line. However, to connect a hub to the Ethernet Port of BritePort 8120, you must use a crossed Ethernet cable. For the assignment of IP addresses and configuration, you should talk to your service provider.

7 Can I connect a LAN to my BritePort 8100C?

Yes, you can connect your LAN to the Ethernet port of BritePort 8120. You should talk to your service provider so that your DSL connection is configured accordingly.

8 How do I connect to the Internet?

DSL provides you a permanent, always-on, connection to the Internet. On your DSL connection, once you have installed the BritePort, you no longer need to 'dial-up' in order to get online. Simply plug your BritePort 8120 into a DSL-ready phone outlet in you home, and you are ready to receive the high-speed Internet connection.

9 What should I do if my DSL connection is not working?

A DSL connection provides a permanent dedicated connection to the Internet and the chances of its going down are very little. However, if this happened, you should first of all check the hardware connections of your DSL modem as given in this user's manual, and then follow the steps given in the ***Appendix B: Troubleshooting*** section.

10 Will my telephone work if my DSL line goes down?

Your DSL line can go down if the DSL equipment at your telephone company's office develops some problem, and this should not effect your normal telephone connection.

11 How can I check whether I have either Static or Dynamic IP addressing?

During the configuration process, if you are required to enter a specific IP address and Subnet Mask provided by your DSL service providers, that means you have a static IP address. To check if a PC within your DSL network has a Static or Dynamic (DHCP) IP address, refer to the following brief steps.

In Windows 95/98/Me, right-click on the **Network Neighborhood** icon located on the PC desktop. Select **Properties**, and then click to open the "Network" dialog box. Click the **Configuration** tab to show the list of installed network components. Highlight your Ethernet card, for example, **TCP/IP -> PRO/100 Management Adapter**, and then click the **Properties** button to bring out the "TCP/IP Properties" dialog box. In the dialog box, click the **IP Address** tab and see what option has been selected. If **Specify an IP address** is selected, then you have a Static IP address. If **Obtain and IP address automatically** is selected, then you have a Dynamic IP address.

In Windows 2000/XP, righ-click on the **My Network Places** icon located on the PC desktop, and then click **Properlies** to open the "Network and Dial-up Connections" window. Select **Local Area Connection** and right-click on **Properties** to open the "Local Area Connection Properties" dialog box. In the components list, highlight **Internet Protocol (TCP/IP)** and click the **Properties** button to bring out the "Internet Protocol (TCP/IP) Properties" dialog box. If **Obtain an IP address automatically** is selected, then you have a Dynamic IP address. Otherwise, you have a Static IP address.

12 How can I find the IP address and the Subnet Mask?

In Windows 95/98/Me, click the **Start** button and click **Run**. The "Run" dialog box appears. In the **Open** field, type **winipcfg** and click **OK**. The "IP Configuration" window appears, which provides you information about your network including IP address, Subnet Mask, and Gateway.

In Windows 2000/XP, click the **Start** button and click **Run**. Type **cmd** and click **OK** to open the "Command Prompt" window. (Or, go to **Start** -> **Programs** -> **Accessories** -> **Command Prompt** to open the window.) Then, type **ipconfig** and press the **Enter** key to show the IP address and other information about your computer.

13 Which Ethernet Cards are compatible with the BritePort 8120?

Your BritePort 8120 is compatible with almost all Network Interface Cards compliant to IEEE 802.3 Ethernet standard. Also, the BritePort's Ethernet port speed is 10/100 Mbps.

14 Which protocols does the BritePort 8120 support?

BritePort 8120 supports TCP/IP — the suite of protocols for the Internet, which has become the global standard for communications. TCP/IP includes several protocols, the two main being TCP and IP.

15 Does the LAN connection of the BritePort 8120 support 100 Mbps Ethernet?

Yes, BritePort 8120 supports both 10 & 100 Mbps LAN traffic.

16 How safe is my DSL connection?

Your DSL connection provides you fast and permanent connection to the Internet. In spite of the fact that your computer is always connected to the Internet, the DSL security breaches are rare to come by because of the security system installed on your DSL service provider side. In addition, the gateway functions of your BritePort 8120 provides extra protections to your DSL network. Windows XP, 2000 and Windows Me also have plenty security features and further protect your DSL network. Windows 95/98 user can download security related patches from Mircosoft's website.

In general, besides the security features provided by BritePort 8120, your DSL service provider, and your PC operating system, it is also very important to develop a safe computing habit:

- Protect your passwords. Do not divulge passwords to anyone and be especially careful if someone asks you for the password online or over the phone.
- Protect your online transactions by using a secure browser.
- Before typing your credit card and other important information online, make sure that the website is secure and trustworthy.
- On your computer, for the folders that contain confidential and financial information, turn off the “File Sharing” option.
- When you are not using the Internet for a long duration, you may switch off your computer or disconnect it from the DSL line.
- You should use anti-virus software, as well as intrusion detection software and update it regularly.
- Do not open e-mail attachments unless you trust the sender and are sure of the identity of the sender.
- Do not download files and software from unreliable sources.

17 What is NAT?

Network Address Translation (NAT) is a standard that enables you to connect multiple computers to the Internet using one IP address. All the outgoing traffic appears to originate from the router’s IP address. NAT automatically provides firewall protection without any special setup.

18 What is PPPoE?

Point-to-point protocol (PPP) is a protocol for transmitting packets over serial communication links, which is generally used by ISPs to allow dial-up users to connect to the Internet through their PPP servers. To the end user, PPP incorporates user name and password security. The DSL providers use Ethernet instead of serial communication and the protocol is PPP over Ethernet (PPPoE). PPPoE also provides password security and the ISP can measure the traffic generated by each user.

19 Can I have my own Web site?

Yes, the DSL connection provides a permanent connection to the Internet and you can run your Web server 24 hours a day. Talk to your service provider to obtain a static IP address in starting your own Web site.

20 Can I have multiple static IP addresses for BritePort 8120?

Yes. You should contact your DSL service provider for fees and details on how to obtain more static IP addresses.

21 What should I do if I forgot my login information to access the Web-based configuration tool of BritePort 8120?

Refer to the ***Chapter 2: Hardware Installation*** section of this User Manual, if you forgot your login information, press the **RESET** button located on the backside of your BritePort 8120. This will allow you to reset the username and password to the manufacturing default values without changing the existing configurations. For the default login information, refer to ***Chapter 3: BritePort Setup Wizard*** sections of this User Manual.

22 How do I configure my BritePort 8120 to support multiple IP addresses?

For information, please refer to the ***Chapter 3: BritePort Setup Wizard*** and ***Chapter 4: BritePort Configuration Tool*** section in this manual.

23 How do I configure my network computers for Static IP address?

In general, there are two scenarios when you need to set up your network computers for Static IP address. The first is when you subcribe multiple Static IP addresses from your DSL service provider and have each Static IP address being assigned to a computer. The second is when your DSL network environment requires you to assign each computer a specific internal IP address. In this section, we will provide instruction based on the first scenario.

In Windows 95/98/Me,

1. Click **Start** -> **Settings** -> **Control Panel** to open the “Control Panel” window.
2. Double-click the **Network** icon to open the “Network” dialog box.
3. Click the **Configuration** tab, and from the list of “The following network components are installed” select the **TCP/IP** with your Ethernet card, for example, **TCP/IP->Realtek RTL8139(A) PCI Fast Ethernet Adapter**. Then, click the **Properties** button to open the “TCP/IP Properties” dialgo box.
4. Click the **IP Address** tab to open the “IP address” dialog box. Select the option **Specify an IP address** and enter the **IP Address** and **Subnet Mask** provided by your DSL service provider. Then, click the **Gateway** tab.
5. Enter the Gateway address provided by your DSL service provider in the **New gateway** field, and click **Add** to add the new Gateway address.

6. Click the **DNS Configuration** tab to open the "DNS Configuration" dialog box. Select the option **Enable DNS** and then enter **Host**, **Domain**, and **DNS Server Search Order** provided by your DSL service provider. Click **Add** to apply the change, and click **OK** to confirm the settings.
7. At this time, the "System Setting Change" window appears and prompts you to restart your computer. Click **Yes** to proceed.

In Windows 2000/XP,

1. Click **Start** -> **Settings** -> **Network and Dial-up Connections** -> **Local Area Connection** to open the "Local Area Connection Status" window.
2. Click **Properties** to open the "Local Area Connection Properties" dialog box.
3. In the components list, highlight **Internet Protocol (TCP/IP)** and click **Properties** to bring out the "Internet Protocol (TCP/IP) Properties" dialog box.
4. Select **Use the following IP address**. Enter the **IP Address, Subnet mask**, and **Default gateway** information provided by your DSL service provider.
5. In the same dialog box, select **Use the following DNS server addresses** and enter the **Preferred DNS server** and **Alternate DNS server** information provided by your DSL service provider, if any. To do so, you can also click **Advanced** to configure your computer's DNS server settings in the "Advanced TCP/IP Settings" dialog box.
6. Finally, click **OK** to apply the new settings and click **OK** again to confirm all the changes. This will bring you back to the "Local Area Connection Properties" dialog box.
7. Click **Close** to close the dialog box. At this time, Windows may prompt you to restart your computer. Click **Yes** to proceed.

D. GLOSSARY

In order to understand a new technology, it is important that you understand its terminology. This section offers basic explanation to some of the common networking and DSL terms.

ADSL - Asymmetric Digital Subscriber Line — A Digital Subscriber Line (DSL) technology that allows digital data to be sent over existing telephone lines and the downstream data rates are appreciably higher than the upstream data rates. Many different DSL technologies have been developed and ADSL is undoubtedly the most popular DSL technology for individuals and small businesses because ADSL offers higher downstream (or download) data rates than upstream (or upload) data rates.

Analog signal - A continuous signal, which is having a continuous range of values, for example the voice signal on the Public Telephone System.

ATM - Asynchronous Transfer Mode — A dedicated connection transfer technology in which the information is organized into fixed-length cells, each of 53 bytes. In ATM a virtual circuit, which is defined by VCI and VPI values, is setup between two devices to communicate over the network. An ATM network handles data in gigabits per second.

ATM Adaptation Layer (AAL) - In the ATM layer model, above the Physical layer rests the ATM layer and the ATM Adaptation layer. The AAL performs the task of mapping between the ATM layer and the higher layers. The four AALs recommended by ITU-T are AAL1, AAL2, AAL3/4, and AAL5.

ATM Layer - In the ATM layer modem, the ATM layer is above the Physical layer. The ATM layer is responsible for transporting information across the network.

ATU-C - The Transceiver Unit installed at a telephone company's central office to connect multiple DSL users to a high-speed backbone network.

ATU-R - The digital Transceiver Unit (or equipment) installed at a customer's premises for connecting to the DSL line.

Backbone - The part of the communications network intended and designed to carry the bulk of the traffic. It provides connectivity between various sub-networks in an enterprise's wide area network.

Bandwidth - A measure of the maximum rate of data transfer. Greater bandwidth allows the transfer of more information in a given period of time. For digital services, the bandwidth is usually expressed in bits or bytes per second.

Binary - A number system that has only two digits 0 and 1.

BPS - Bits Per Second — A measurement of data transmission speed.

Bridge - A hardware device that links two or more local area networks (LANs) and manages the transfer of data between these LANs.

BritePort - A term coined by Broadxent, Inc. that refer to a DSL equipment at customer's premises.

Broadband - A transmission media that can handle the transmission of multiple messages, at different frequencies, at a time. The broadband signals use analog carriers.

Browser - See ***Web browser***.

Cable modem - A modem that sends and receives digital data on the same cable that brings television broadcast signals to your home.

CAP - Carrierless Amplitude Phase modulation — A modulation technique used for transmitting digital data using an analog carrier. ADSL modems use either CAP modulation or Discrete Multitone (DMT) modulation.

CO - Central Office — a telephone company's office facility that handles the switching of telephone calls on the public switched telephone (PSTN) for a small regional area.

CPE - Customer Premises Equipment — The equipment installed at a customer's premises for the DSL service, for example a DSL modem.

Desktop - When a graphical user interface (GUI) is used to access applications such as with the Macintosh or Windows, the on-screen background is said to be the desktop.

DHCP - Dynamic Host Configuration Protocol — A method of assigning a temporary IP address to a host, such as a computer, connected on a specific network. With dynamic addressing, a particular host has a different IP address each time it connects to the network. (also see ***IP Address*** and ***Static IP Address***)

Digital - Having discrete values, for example the data represented by binary numbers (0's and 1's). Computers communicate using digital data.

DMT - Discrete Multitone — A method of modulating digital signals over an analog carrier.

DMZ - Demilitarized Zone — a computer host or small network inserted as a "neutral zone" between a company's private network and the outside public network. It prevents outside users from getting direct access to a server that has company data. The DMZ is a subnetwork (subnet) that may sit between firewalls or off one leg of a firewall. It is also an optional and more secure approach to a firewall and effectively acts as a proxy server as well.

DNS - Domain Name System — This allows you to specify a symbolic name, a meaningful and easy-to-remember "handle," instead of an IP address. The DNS is the way that Internet domain name is located and translated into numeric Internet Protocol addresses.

DNS Server - A server that contains both the English and numerical addresses of all computers connected to the Internet. When you specify an e-mail or IP address using the "English" domain name, the DNS server will return the corresponding numeric address.

Domain Name - The Internet address or the URL of a website.

Downstream - Data transfer from the telecommunication network to the customer's premises.

Driver - A program that a computer uses to control the operation of a peripheral device, such as a keyboard, modem, monitor, card, or cable.

DSL - Digital Subscriber Line — A technology that transforms ordinary telephone lines into high-speed digital lines for fast Internet access. This technology uses a digital coding technique to get large capacity out of your existing phone line without interfering with regular services — you can talk on your phone and at the same time surf the Web. Thus DSL provides simultaneous Internet and voice/fax capabilities over a single telephone line without any interference.

DSLAM - DSL Access Multiplexer — A network device at a telephone company's office that receives signals from multiple customer DSL connections and puts the signal on a high-speed backbone line using multiplexing.

Dynamic IP address - See ***DHCP***.

Ethernet - A local-area network (LAN) protocol that supports data transfer rates of 10 Mbps. It is one of the most widely implemented LAN standards that operates over the twisted pair or coaxial cable. A version of Ethernet, called 100 Base-T (or fast Ethernet), supports data transfer rates of 100 Mbps.

Ethernet card - A network interface card that plugs into a computer and allows the computer to send and receive data to and from a network.

Fast Ethernet - An Ethernet specification with a speed of 100 Mbps (10 times faster than 10BaseT).

Fixed IP Address - see ***Static IP Address*** and ***IP Address***

Flash memory - A non-volatile memory on EEPROM chip, that can be erased and electrically and reprogrammed.

FTP - File Transfer Protocol — A high-level protocol for transferring files from one computer to another. FTP is one of the basic Internet services.

G.DMT - An industry standard known as G.992.1, which refers to ADSL technology that uses DMT modulation and does not require a splitter box to be installed at the user's premises. This technology supports upstream data rates of up to 8 megabits per second and downstream data rates of up to 1.544 megabits per second.

G.Lite - A "splitterless" ADSL technology that uses CAP or DMT modulation and supports upstream data rates of up to 1.5 megabits per second and downstream data rates of up to 512 kilobits per second.

Gateway - A network device — A dedicated network machine that connects two or more separate networks that may use different protocols (such as ATM and TCP/IP) and translates the protocols.

Hardware - All the electric and mechanical parts and devices used in a computer or attached to it.

HTML - Hypertext Markup Language — The format used for writing documents to be viewed with a Web browser. Items in the document can be text, images, and/or links to other HTML documents, sites, and resources on the Internet.

Hub - A device used for connecting nodes in a star topology, that is all the nodes are connected to a central hub. A *passive* hub simply organizes the wiring, while an *active* hub besides organizing the wiring, regenerates and retransmits the signals.

Interface - The physical arrangement that supports the attachment of a device to a connector or to another device.

Internet - The world's largest computer network, linking computers and networks all over the world, that communicate via a standard TCP/IP protocol.

Internet Explorer - A popular Web browser from Microsoft.

IP Address - The address for a computer on a TCP/IP network. IP address refers to a particular machine on the network. The format of an IP address is a 32-bit numeric address written as four numbers separated by periods. Each number can be 0 to 255, for example, 11.160.10.240 is an IP address. Any machine connected to the Internet is assigned an IP address. (also see ***DHCP*** and ***Static IP Address***)

IPoA - IP over ATM — The ATM networks have a connection oriented network layer, while the Internet has connectionless network layer. The IPoA is the standard method used for sending IP packets over ATM.

ISDN - Integrated Services Digital Network — A special dial-up telephone wire connection that allows digital data transmission to co-exist with the telephone voice (analog) signals. ISDN requires a special phone line from the Telephone Company. The basic rate ISDN (also called 2B+D) is a four wire (two pairs of twisted telephone cable) connection that provides two B channels that transmits data at 64 kbps and third D channel that transmits data at 16 kbps.

ISP - Internet Service Provider — An organization that provides Internet access to the computer users.

LAN - Local Area Network — A computer network that spans a relatively small area. Most LANs are confined to an office, single building, or group of buildings.

LED - Light Emitting Diode — An electric component that emits light (turns ON) when current flows through it.

Local loop - The telephone lines running from a telephone company's central office in a local area to its customers' telephones at homes and offices.

Login - The account name (user name or user ID) and/or password used to access a computer system or a Web site.

kbps - Kilobits per second — a measure of data transfer speed.

KB - Kilobytes — 1,024 bytes.

Mac Address - Media Access Control — A unique address associated with an Ethernet card.

Mbps - Megabits per second — A measure of data transfer speed.

Megabits/Megabytes - One million bits/bytes.

Modem - A device that allows a computer to transmit data to other computers via telephone lines.

Multiplexing - Sending multiple signals on one channel by dividing time or frequency intervals among them.

NAT - Network Address Translation — An Internet standard that enables a local-area network to use one set of IP addresses for internal traffic and a second set of IP addresses for external traffic. NAT provides a type of firewall security by hiding internal IP addresses. Since they're used internally only, there's no possibility of conflict with IP addresses used by other companies and organizations.

Netscape Navigator/Communicator - A popular Web browser.

NIC - Network Interface Card — A card that is installed in a computer so that it can be connected to a network. The NIC manages the flow of network information to and from the computer.

Octet - A group of eight binary bits. A less precise term for an octet is a byte.

Packet - A unit of information, which is data of a fixed length, sent as a whole from one device to another on a network. It contains a header with destination address and control information and a payload that has the user data.

Ping - Packet Internet Groper — An Internet program used to determine whether a specific IP address is accessible. It works by sending a packet to the specified address and waits for a reply. PING is used primarily to troubleshoot network connections.

Plug-and-Play - The capability of an operating system to automatically detect any new device attached to the computer.

POTS - Plain Old Telephone Service — The term refers to the conventional telephone service using Public Switched Telephone Network (PSTN).

POTS Splitter - The POTS splitter box enables the telephone line — the plain old telephone service (POTS) — to carry voice signals and digital signals simultaneously. The DSL-enabled line is connected to the POTS splitter and the splitter provides two outputs — one containing both the POTS and DSL signals and the other containing only the POTS signals. To install a splitter box, a technician from your telephone company must visit your home. However, on a dedicated DSL connection, a splitter box is not required. Also ADSL Lite or ADSL G. Lite does not require the installation of a splitter box at the user's premises, and this division is achieved with software rather than hardware. Thus a visit by a telephone company technician is not required.

PPP - Point-to-Point Protocol — A communication protocol for transmitting packets over point-to-point links, which is commonly used by ISPs to allow dial-up users to connect to the Internet.

PPPoA - The standard for using ATM Adaptation Layer 5 for framing PPP encapsulating packets, as described by RFC 2364.

PPPoE - PPP over Ethernet — A protocol used for transmitting packets over Ethernet, which is generally used by DSL service providers to allow users to connect to the Internet through their Ethernet servers.

Protocol - A set of agreed-upon rules for transmitting data between two devices. From a user's point of view, his computer must support the right protocols to make his machine communicate with other computers.

RADSL - A Rate Adaptive ADSL technology from Globespan Semiconductors.

Reboot - When a computer is shut down and restarted, it is rebooting.

RFC 1483 - Request For Comment 1483 — A standard method used for linking different devices to communicate with each other across networks and assure "inter-operability."

RFC 2364 - See ***PPPoA***.

RJ-11 - A connector/socket for two pairs (four wires) of twisted pair cable that is used primarily to connect telephone equipment in the United States.

RJ-45 - A connector/socket for four pairs (either wires) of twisted pair cable that is used commonly to connect computers onto a local-area network, especially to the Ethernet. A RJ-45 connector looks similar to the RJ-11 connector used for connecting a telephone equipment, however RJ-45 is slightly wider than RJ-11.

Router - A hardware device that connects two separately functional networks that use same or different protocols. Routers look at the destination addresses on the packets passing through them and then decide the best route to send them on.

SDSL - Symmetrical DSL — A DSL technology that provides the same amount of bandwidth (up to 1.5 Megabits) both upstream and downstream.

Segment - A physical or logical portion of a network. An Ethernet segment does not cross any bridge or router, but includes everything up to a bridge or router connection.

Service Provider - See ***ISP***.

SNMP - Simple Network Management Protocol — A protocol used commonly for managing network devices remotely.

Static IP address - A permanent IP address that is assigned to a node in a TCP/IP network. Servers and routers are usually assigned static IP addresses, while client stations are often assigned dynamic IP addresses from a DHCP server each time they come online. For users connected to the Internet via cable modems and DSL either in the office or at home using long term (static) IP addresses, it makes them more vulnerable to hacker attacks than IP addresses that are dynamically assigned. See dynamic IP address, IP address and DHCP.

Subnet address - The portion of IP address that identifies the subnet.

Subnet Mask - A 32-bit address string that is used to identify the bits of an IP address that are used for the subnet address. A Subnet Mask is usually represented in dotted-decimal notation, for example, 255.255.255.0.

Subnet or Subnetwork - Any network that is a part of a larger IP network and is identified by a subnet address.

Switch - A device used for connecting nodes in a star topology, that is all nodes are connected to a central switch. By monitoring packets, a switch learns which devices are connected to its ports and then sends a packet to the appropriate port only.

TCP/IP - Transmission Control Protocol/Internet Protocol. A suite of communication protocols that are used by computers or networking devices on the Internet so that they can communicate with each other. TCP/IP uses several protocols, the two main being TCP and IP.

Telco - The local telephone company office.

10 Base-T - Wiring standard used for Ethernet networks that can transmit data at up to 10 Mbps transmission using baseband unshielded twisted pair cable. Maximum allowable cable length is 100 meters (330 feet).

Twisted pair cable - A cable that consists of two wires twisted together. This cable is less expensive than coaxial, whereas it is thinner and can break more easily than a coaxial cable.

UPnP - Universal Plug and Play — a standard that uses Internet and Web protocols to enable devices such as PCs, peripherals, intelligent appliances, and wireless devices to be plugged into a network and automatically know about each other. With UPnP, when a user plugs a device into the network, the device will configure itself, acquire a TCP/IP address, and use a discovery protocol based on the Internet's Hypertext Transfer Protocol (HTTP) to announce its presence on the network to other devices.

Upstream - Data transfer from the customer's premises to the telecommunication network at CO.

URL - Universal Resource Locator — The addressing system that helps the users to locate websites on the Internet. It precisely tells the name of the server where a site's files are stored, the file's directory path, and its file name.

USB - Universal Serial Bus — A plug-and-play interface that allows the user to attach a device without having to add an adapter card and turning off the computer.

VCI - Virtual Channel Identifier — A numerical value assigned by your DSL Service Provider to your DSL device. VCI goes hand in hand with VPI to ensure connection with your DSL Service Provider's equipment.

VPI - Virtual Path Identifier — A numerical value assigned by your DSL Service Provider to your DSL device to ensure proper connection with the DSL equipment at the Telephone Company's office.

WAN - Wide Area Network — A computer network that spans a relatively large geographical area. Typically, a WAN consists of two or more local-area networks (LANs).

Web browser - A program used to access the Internet resources available through the World Wide Web.

Web server - A host computer that sends Web page to other computers.

World Wide Web - A vast resource of information stored on computers and servers connected to the Internet.

xDSL - Various DSL technologies has been developed and the “x” indicates the type of technology being implemented.

E. WARRANTY INFORMATION

Broadxent warrants that equipment furnished will be free from defects in material and workmanship for a period of one year from the confirmed date of purchase of the product new from the retail location. Upon written notice of any such defect, the manufacturer will, at its option, repair or replace the defective item under the terms of this warranty, subject to the provisions and specific exclusions listed herein.

This warranty shall not apply to equipment that has been previously repaired or altered outside our facilities in any way, nor will it apply if the equipment has been used in a manner exceeding its specifications or if the serial number has been removed.

We do not assume liability for consequential damages as a result from our product use, and in any event our liability shall not exceed the original selling price of the equipment.

The equipment warranty of Broadxent, Inc. shall constitute the sole and exclusive remedy of any Buyer of the manufacturer's equipment and the sole and exclusive liability of the manufacturer, its successors or assigns, in connection with equipment purchase and in lieu of all other warranties expressed, implied or statutory, including, but not limited to, any implied warranty of merchantability or fitness and all other obligations or liabilities of the manufacturer, its successors, or assigns.

Print and fill out the "Registration Card" on Page 95. Please fax or mail it to Broadxent, Inc. for product registration.

FCC Registration Information for Users

This product is compliant and registered with the CFR47-Part 68 of the Federal Communications Commission (FCC). The FCC requires us to provide you with the following information:

- Connection to the nationwide telephone network should be made by using standard modular telephone jacks, type RJ-11.
- This equipment may not be used with 'Party Line' services or with 'Coin Telephone' lines.
- You should provide the FCC registration number and Ringer Equivalent Number (REN) of this product to your telephone company. The REN is useful in determining the number of devices you may connect to your telephone line and still have all of these devices ring when your telephone number is called.
- If your telephone equipment causes harm to the telephone network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance. If advance notice is not practical, you will be notified as soon as possible. You will have an opportunity to correct the problem, and you will be informed of your right to file a complaint with the FCC. Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the proper functioning of your product. If such changes are planned, you will be notified in advance.
- If it is determined that the equipment still fails to operate properly, the FCC requires that the unit be disconnected from the telephone line until the problem has been corrected. Repair to this equipment can only be made by the manufacturer, its authorized agents, or other parties who are authorized by the FCC.

Registration Card

Table 1:

	Broadxent BritePort 8120 Product Registration
Name:	
Company:	
Address:	
City/State/Zip:	
Phone:	
E-mail:	
Serial Number:	
Purchased from:	
Date of Purchase:	

Please print and fill out the above Product Registration Card and send it to:

Broadxent, Inc.
188 Topaz Street
Milpitas, CA 95035
ATTN: Customer Service

F. CONTACT INFORMATION

Reach us by Phone:

General Line: (408)719-5100
General Fax: (408)262-1390

Reach us by E-Mail:

Send your questions and comments by e-mail to the following address:
E-Mail: adslsupport@broadxent.com

Reach us by Mail:

Broadxent, Inc. - A Subsidiary of Creative Technology, Ltd.
188 Topaz Street
Milpitas, CA 95035

Reach us on the Web:

http://www.broadxent.com

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